A Presidential Address

ON

THE SANITARY NEEDS AND ASPIRATIONS OF INDIA.

Delivered before the Indian Medical Congress in St. Xavier's College, Calcutta, on Dec. 24th, 1894,

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PRESIDENT OF THE CONGRESS.

[SURGEON-COLONEL HARVEY commenced with a few graceful words of thanks to the Viceroy of India, the Earl of Elgin, for presiding and of acknowledgment of the unwearied exertions of the secretaries.]

I will now try to indicate in the briefest way what modern medicine has done, is doing, and may hope in the future to do for India. The subject is so vast that it can be given in outline and no more—a mere scene-painter's sketch, not a finished picture. By modern medicine I of course mean the science introduced from Europe by the earliest medical officers of the Honourable East India Company. From the small beginnings made by them has developed by natural evolution our system of hospitals and dispensaries, sanitation, vaccination, and medical education as they exist to-day, and from which we hope that a further development may take us in time to things unattempted yet. It is a curious fact that it was in gratitude to a medical envoy for professional services that the first firman was granted to the Company by the Emperor of Jehangir. In the earlier days of the Company, and, in fact, up to the evil times of 1857, and to some extent even yet, we find medical officers in the most incongruous and unexpected positions and places—residents and envoys at foreign courts, commissioners and deputy commissioners, superintendents of gunpowder factories, postmasters-general, heads of such departments as the telegraph, masters of mints, and so on. This, I take, was due in great measure to the fact that in the earlier days both civilians and military officers came out so young that they were beaten in the advantages education gives by the older and more scientifically trained medical officers. The medical science of that day we should now look upon as very primitive, but it was the best that was to be had and did yeoman's service to the Company and the people. As the red boundary line of England's influence extended, dispensaries and hospitals sprang up in all the large cities and brought relief to many—specially surgical relief. The idea of preventive medicine had not yet been born even in England, so that no sanitary service was attempted. Vaccination was, however, started within two years of its discovery by Jenner, and a beginning was made with medical education. From a very early time native doctors, as they were then called, were trained at the local dispensaries, beginning as apprentices or even as hospital coolies, picking up what they could at the bedside, aided by informal teaching from the civil surgeon. The results, strange as it may seem, were sometimes surprisingly good. I have seen lithotomy and cataract operations ideally perfect intechnique, finish, and result performed by a man who had never attended a medical school and knew next to nothing of anatomy. As a rule, however, the results were not satisfactory, and an enormous advance was made when, in 1832, a vernacular medical school was started in Calcutta. Systematic medical education really began, however, with the opening of the Medical College of Bengal in 1834, followed by that at Madras in 1835 and at Bombay. In all those the instruction was in English. The Vernacular Medical School in Calcutta was followed by one at Hyderabad, founded in 1846; another at Agra, in 1855; and one at Lahore, in 1860. When I came to India, in 1865, these were the only schools.

I tried to get for this address a statistical statement showing the chief medical and surgical results obtained throughout India in 1865. The first year for which complete statistics are available is, however, 1877. If the progress between 1865 and 1877 was at the same rates as between 1877 and 1893, we should have to halve the figures of 1877 to arrive at those of 1865. In 1877, then, 6,142,070 patients were treated in 1147 hospitals and dispensaries, 4,633,105 vaccinations were performed, 2682 operations for stone, and 2372 for cataract. These were great results, and reflect the utmost credit on the officers who attained them; but they were nothing in relation to the population and true needs of the country. Small tentative efforts had been made to introduce sanitary improvements—I am now speaking of 1865,—but systematic sanitation, as we know it, had not begun. The Sanitary Department, though its formation was under consideration, had not been constituted, and the death-rate of the European troops had from the beginning of the century reached the appalling annual average of 69 per mille. A Royal Commission sitting in 1864 ventured to express a hope that the introduction of scientific sanitation might reduce this to 20 per mille, and the creation of the Sanitary Department, as a result of their recommendations, may be taken as a boundary line dividing the past from the present of medical work in India. My period of service, now close on thirty years, coincides with this. It has been marked by enormous progress in all directions. Medical colleges, in which a complete education is given in English, have been opened at Lahore, Allahabad, Tanjor, and Nellor and affiliated to the universities. At Hyderabad the classes have been taught in English since 1882. Additional vernacular medical schools for the education of civil hospital assistants and civil medical practitioners are now working at Sealdah, Patna, Dacca, Katak, Poonah, and Ahmadabad.

The medical education of women has also been recently introduced, and girls are now trained for the purposes of the Dufferin Fund at most of the medical schools. The number of hospitals and dispensaries open last year was 2025, in which were treated 16 973,468 patients, increases of 76 and 176 per cent. over 1877. There were 4476 operations for stone and 20,279 for cataract. Vaccination has been enormously extended and put on a much more systematic footing, 7,502,024 operations were done, an increase of 62 per cent. These figures indicate great activity and afford ground for congratulation, yet, compared with the wants of the country, indicate that they still touch but the fringe of the population. In Bengal, for instance, only one-fifteenth of the people are within five miles of a dispensary, and a considerable percentage of the children born escape vaccination, so that bad epidemics of small-pox are still possible. Of recent years an entirely new development has taken place in the organisation of special hospitals for women, officered by medical women, under the fostering care of the noble Lady Dufferin, whose name, like Milton's, should resound for ages among the zenanas of India. Still in its infancy, it is doing enormous good to a class whose needs are of the sorest, and it is, I believe, destined to flourish and increase till every important town in India has its Dufferin Hospital side by side with its hospital for males. Sanitary progress, however, is the chief feature of the last thirty years, and more especially of the last decade. I have told you how the death-rate of British soldiers up to 1857 averaged 69 per mille, and that the Sanitary Commission ventured to hope it might be reduced to 20. This estimate was too modest, for since 1882 it has never exceeded 15, except in 1889, when it was 16·6, less than a quarter of the previous rate. The reduction has been effected by hygienic reforms of all kinds, but especially by the gradual improvement of the water-supply in cantonments—first, by cleaning and protecting wells and tanks and setting them aside for drinking purposes only—a plan which has been followed for many years; and of recent years by scientifically devised water works provided with all the latest improvements. A glance at the two maps on the wall will give a better idea than any words can of the great recent advances in this direction. The first, representing the India of 1865, is like the chart of the shark-hunters, "a perfect and absolute blank." The second shows the cities, towns, and cantonments now properly supplied, or in course of being supplied, with pure water. In those with dotted lines the works are in hand, but not yet in operation. The Cawnpore works are complete in the town, but have not yet been extended to the cantonment. The Marri water scheme supplies Durga Gali, Kyra Gali, Bawan, Kuldanna, Clifden, Gharial, and Thopia, as well as the Marri Bazaar, cantonment, and civil station. It cost 720,000 reis. The whole of the troops in the hills near Marri, numbering some 5000, are thus supplied with pure water. Many additional schemes are under consideration. It has long been the fashion to poke fun at the Sanitary Department, to denounce it as a sham and a pretence, producing reports which lead to nothing—*vox et*

præterea nihil,—and sanitary officers themselves have sometimes felt that much of their labour was of the Sisyphean sort in the absence of any means to enforce and carry out their recommendations. The map seems to me to point to encouragement instead of despair. Even in England modern sanitation is a thing of the present century—mainly of the last half-century; finality has not been reached, and popular ignorance and prejudice and vested interests still block many possible improvements. In India, where *stare super vias antiquas* (what was good enough for our fathers is good enough for us) is a sentiment deep-rooted in the hearts of the people and is almost a part of their religion, it is small wonder that the progress has been slow. Still, the progress is there, and in India, as elsewhere, tends to acquire continually increasing force and volume as it proceeds. Municipal Acts containing provision, *inter alia*, for sanitary measures, village sanitation Acts specially designed *ad hoc*, have been embodied in our laws, and, though mainly permissive, can be extended by notification to such places as seem sufficiently advanced to accept them. Sanitary boards on which is a sanitary engineer are now established in most provinces. Various schemes are on foot for extension of waterworks, drainage, and other improvements. Sam Slick has warned us not to prophesy unless we know. I will not prophesy, but will now try to indicate a little more fully in what directions progress is likely and desirable, the difficulties in the way, and the means of overcoming them. No one is more thoroughly aware than I how little the great deal that has been done is, compared with what is left to do, and no one can recognise more fully the difficulties in the way of affecting such a general reform as shall satisfy Europe. When asked what India wants from medical and sanitary science, I am tempted to use the words of the ragged urchin in *Punch*, who replied to a similar question, "I thinks I wants most everythink." Let me enumerate the needs: first medical, then sanitary. We will take the question as to the means of providing for them later. The first and greatest is like Cerberus—three-headed. To bring the advantages of modern medicine within reach of all, we require a great extension of hospitals and dispensaries, officered by a class of locally-trained practitioners of higher professional attainments than the average of those educated at existing schools. Another need felt greatly by the profession is that of some such Acts as the Medical Acts of England, by which properly educated and duly qualified men may be distinguished from the hosts of quacks, charlatans, and impostors who everywhere abound. Another great and crying need both for the profession and the public is the extension to India of those modern discoveries which are so fruitful for good in Europe, and which have such splendid potentialities of future development. It is not creditable that India, whose crowded millions are as interested as any in the solution of the problems of disease and the provision of remedies, should be doing nothing to bring about such desirable results. It is not to the credit of England that when the plague breaks out in a Crown colony she should be dependent on a country like Japan for a demonstration of the cause of it. This need will be met and India take her proper place among those countries which are trying to advance science for the benefit alike of men and animals when the Pasteur Institute of India is established. That institute we mean to have, and to have mainly as the result of private enterprise. Our success has been so far hampered by the well-meaning efforts of kind-hearted persons who have let their imaginations run away with them. This is not the place to discuss the question of vivisection. I am about to deal with it elsewhere, and hope to be able to convince all but a few irreconcilables that the institute is entirely justifiable, and that sensitive and humane men may freely subscribe to it, as I again ask them to do. I must be allowed, however, to protest publicly against baseless charges of abominable cruelty levied against the medical profession as a body. I claim, and I believe public opinion will support me, that no profession is more full of sympathy for suffering or more prompt and eager to relieve it. It is these same irreconcilables or others of a like kidney who, ignoring the alcoholic beam in the eye of England, wish to remove the opium mote from the eye of India regardless of the wishes and interests of her people. It is they, too, who prevent us from preventing preventable disease, and thus make themselves individually instrumental in causing the conveyance of a horrible malady to numbers of innocent women and children, and in allowing the admissions from these diseases to rise from 15,006 in 1883 to 32,663, or 466 per mille per annum, in 1893, figures which represent three regiments permanently in hospital and useless to the taxpayer. It is time that the common-sense of mankind should refuse to be dictated to by a minority of imperfectly informed and unscientific persons whose zeal is in inverse ratio to their knowledge. These then are the chief medical, I now pass on to the sanitary, needs of India.

[Surgeon-Colonel Harvey here pointed out the difficulties to be encountered in any attempt at State-regulated sanitation in countries like India, and continued:]

Praise is constantly lavished on England on account of what she does for sanitation, and the praise is thoroughly deserved. But England is relatively a small country and enormously rich. India is, on the other hand, one of the largest, most populous, and poorest of countries. The standard of comfort as measured in terms of European economics is low, though, as the wants are few, it is really higher than it seems. The population of Great Britain and Ireland is under 38 millions, that of India over 222 millions, excluding nearly 67 millions in native States. The revenue of England is in round numbers and excluding local items £91,000,000 in pounds sterling, that of India 64 millions in tens of rupees, and so terribly has that poor coin, like Lucifer, fallen from his high estate that, in spite of equalling or exceeding, as was the case thirty years ago, the pound sterling, ten rupees, is at present exchange only worth eleven shillings. The income of India is thus represented in sterling by £36,000,000. The revenue per head in England works out £2 8*s.*, in India three shillings and threepence, or in the proportion of fourteen to one. Sanitary works also are probably more expensive in India than in England, for though labour is cheaper and engineering difficulties less, the trained staff is much more expensive, and much of the material has to be imported. The people are unwilling and the Government is unable to provide means for efficient sanitation *per saltum*. Are we, then, to conclude that the problem is insoluble, a conundrum to be given up, and that we should sit down with folded hands and do nothing? I have many times heard the note of despair; I know that many men consider our efforts to be hopeless and our views the dreams of visionaries, blind to facts and deaf to the voice of experience. I confess, gentlemen, that I take a more cheerful view than this; and while fully recognising the difficulties I have pointed out refuse to impale myself on either horn of the dilemma. I hold that it becomes no man to brook despair, that by sitting still in face of a recognised evil instead of contending against it we make ourselves responsible for it, and that it is only by "pegging away" that progress is possible. Our friends, the Fathers, will tell you that a "counsel of perfection" is the highest ideal of excellence, to be kept in view and striven for, although hardly to be attained by frail mortals. A model India with all the latest sanitary improvements is such an ideal. The man of little faith says: "It is high, you cannot attain unto it." We can at least seek after it, and toiling hard against the stream of prejudice and difficulty see distant slopes of a sanitary Eden gleaming in the distance. As George Herbert says—

> "Who aimeth at the sky
> Shoots higher far than he that means a tree."

An Address
ON
HEMIPLEGIA.

Delivered to the Medical Book Society of Leamington at the Warneford and South Warwickshire General Hospital on Dec. 1st, 1894,

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GENTLEMEN,—I propose this evening to consider some of the steps by which our present knowledge of hemiplegia has been attained and to point out some directions in which additions to it may be made; and in discussing this single chapter of the vast subject of nervous disease I shall venture to begin by trying to determine the earliest connexion of this

branch of medicine with our island. The inquiry will carry us to the very beginning of our written history. Quintus Cicero, brother of the great orator, was an officer in the army of Julius Cæsar in Britain in 54 B.C., and in a letter which he wrote from this country to his brother he asks about the poems of Lucretius, and his brother answers: "Lucretii poemata ut scribis ita sunt: non multis lumiribus ingenii, multæ tamen artis."[1] They were both interested in their contemporary the poet, whose poems were probably edited soon after by the orator. In the famous poem, "De Rerum Natura," in which Lucretius sets forth the Epicurean philosophy, is a description[2] of a nervous disease of which we have all seen examples. In reading it we must remember that the poet dwells upon the symptoms as illustrations of his argument that the soul is inseparable from the body, is a mere part or function of it, and lives or dies with it. I shall quote the translation of Munro, the greatest modern student of Lucretius:—"Moreover, it often happens that someone constrained by the violence of disease suddenly drops down before our eyes as by a stroke of lightning, and foams at the mouth, moans and shivers through his frame, loses his reason, stiffens his muscles, is racked, gasps for breath fitfully, and wearies his limbs with tossing. Sure enough because the violence of the disease spreads itself through his frame and disorders him, he foams as he tries to eject his soul, just as in the salt sea the waters boil with mastering might of the winds. A moan, too, is forced out because the limbs are seized with pain, and moans because seeds of voice are driven forth and are carried in a close mass out by the mouth, the road which they are accustomed to take, and where they have a well-paved way. Loss of reason follows, because the powers of the mind and soul are disordered, and, as I have shown, are riven and forced asunder, torn to pieces by the same baneful malady. Then, after the cause of the disease has bent its course back and the acrid humours of the distempered body return to their hiding-places, then he first gets up like one reeling, and by little and little comes back into full possession of his senses and regains his soul." Munro thinks that this passage is based upon one in some medical text-book of the time, and both Hippocrates and Galen give abundant evidence that the epileptic convulsion had been carefully observed by them; but, whether versified from a treatise on medicine or drawn from life, this description of epilepsy in Lucretius has an especial interest for us, since we may justly regard it as the first account of a nervous disease read by a resident in England. It is impossible not to inquire at the same time whether Quintus Cicero's commanding officer was the first patient connected with Britain of whose nervous disease we have a record. It is often stated that Julius Cæsar had epilepsy. The assertion is based on a passage in Suetonius which relates that on two public occasions he had epilepsy.[3] No authority is given for this statement, and though Suetonius was a writer careful as to fact and who probably had good authority for most of his statements, it must be remembered that he wrote more than 150 years after the death of Cæsar, and that the current accounts of the appearances of ill-health of public men on public occasions are very inaccurate even in their own time and tend to become much more so after the lapse of years. That Cæsar's health was breaking before his assassination seems probable from another passage in Suetonius.[4] It is certain that he was subject to tremendous anxiety, and he may easily have exhibited some of its results. The attacks of loss of consciousness, if they took place, may have been fainting fits due to cardiac or cerebral weakness. Had Antistius, the physician, whom Suetonius quotes as stating from his own observation that but one of the twenty-three wounds of Cæsar was a fatal one, also asserted that his two seizures were true epilepsy there would have been no room for discussion. In the absence of such evidence I can only say that the wonderful head, bearing, and countenance of Cæsar as shown in antique sculpture show a mental power and force of character wholly unlike anything which I have ever seen in an epileptic patient.

To return to Lucretius. If his account of epilepsy is based on a medical treatise extant in his day, can we add much to the knowledge of that time? Let us examine that knowledge once more in another author: Aurelius Cornelius Celsus, who wrote nearly a hundred years later, but whose general learning entitles us to assume that he had read all the books on medicine belonging to the period of Lucretius. Celsus[5] says: "Inter notissimos morbos est etiam is qui comitialis vel major nominatur. Homo subito concidit, ex ore spumæ moventur; deinde interposito tempore ad se redit et per se ipse consurgit. Ac solet quidem etiam longum esse usque ad mortis diem et vitæ non periculosum." His descriptions of disease, concise but not lifelike, and his infrequent mention of some slight common observations incline me to the view held by some authorities on other grounds that Celsus was not a working physician; but though there are few details in this account he tells enough to show that the fit was well known and carefully observed in his time. What can we add as a result of the observations of eighteen centuries on epilepsy? Chiefly the discovery of Dr. Hughlings Jackson about the local anatomical cause of some epileptic fits and the method of treatment with bromide of potassium. Yet in no branch of medicine has greater advance been made in this century than in the subject of nervous diseases, and the existing knowledge of hemiplegia is an encouraging example of this progress. Hippocrates had noticed that one side of the body was often paralysed, that this condition sometimes followed an apoplectic fit, that after an injury to one side of the head paralysis of the other side of the body sometimes took place, and that wasting of the paralysed muscles was a sequel to the loss of power.[6] In the books of the Middle Ages the assertion that an injury on one side of the head may be followed by paralysis on the other side of the body is often repeated, whether as matter of compilation or from observation of the fact it is often difficult to know. John Mirfeld the first medical writer connected with St. Bartholomew's Hospital, who wrote in the reign of Richard II., observes that an injury on the right side of the head is likely to lead to paralysis on the left side of the body, and he relates the case of one of the canons regular of St. Austin resident in the Priory of St. Bartholomew in Smithfield.[7] The canon was about to mount his horse, and when he wished to seat himself in the saddle the horse rose on his two hind legs and the canon fell head downwards over the crupper of the horse to earth, and fell so heavily upon his head that straightway he lost the sensation and movement of his whole body. Mirfeld's master, having been called by the friends of the patient, made them shave his head, and then rubbed in oil of roses with a quart of warm vinegar, and sprinkled it with a powder and put over it a fine cloth soaked in oil and vinegar, and over that fastened bandages, and over all the skin of a lamb. Ointment was also rubbed into the patient's neck. On the second day the patient opened his mouth a little. On the third day, when a question was put to him, he made a stammering attempt at an answer, but could not form the words. On the fourth day he spoke stammeringly, and then they handed him a thin warm drink, which he saw and swallowed. The fifth day he took a thin tisane, and on the sixth they gave him chicken broth. He then began to grow stronger and to be able to move, but it was many days before he could walk. He was recommended to eat the brains of birds and kids, and thus doing he was cured. But he was never after of such subtle wit and good memory as before.[8]

The first great addition to the knowledge current in the medical world in relation to hemiplegia was made seven months after the death of Harvey; but, before proceeding to consider it, it is impossible to go on without asking whether the great discoverer of the circulation had thought over the structure and functions of the nervous system and their disorders. In the original manuscript notes of his lecture "De Musculis," which has on two pages the date 1627, the year before the publication of his "De Motu Cordis et Sanguinis," and which is scarcely less worthy of publication than those notes of his lectures of 1616 which were edited in 1886 by a committee of the Royal

[1] Epist. ad Fratrem, Book ii., cap. ii.

[2] Quin etiam subito vi morbi sæpe coactus
Ante oculos aliquis nostros ut fulminis ictu
Concidit, &c.—(Book iii.)

[3] ..... valetudine prospera; nisi quod tempore extremo repente animo linqui, atque etiam per somnum exterreri solebat. Comitiali quoque morbo bis inter res agendas correptus est. Suetonius: Julius, cap. xlv.

[4] Suspicionem Cæsar quibusdam suorum reliquit, neque voluisse se diutius vivere, neque curasse, quod valetudine minus prospera uteretur. Julius, cap. lxxxvi.

[5] Book iii., cap. xxiii.

[6] Epidemics, Book vii., 35.

[7] Manuscript of Breviarium Bartholomei, written in 14th century, now in library of Pembroke College, Oxford, fol. 191a.

[8] Ibid., fol. 192. De Mocione Cerebri ex Casu vel Percussione.

College of Physicians of London, there are some indications of his views on the nervous system. The manuscript of 1627 is written in the curious mixture of Latin and English which Harvey used in all his memoranda. The following notes show that he discussed the functional relation of the several parts of the nervous system.

An Cerebrum, rex;
Nervi, magistratus;
Ramuli nervorum, officiales;
Musculi, cives, populus?

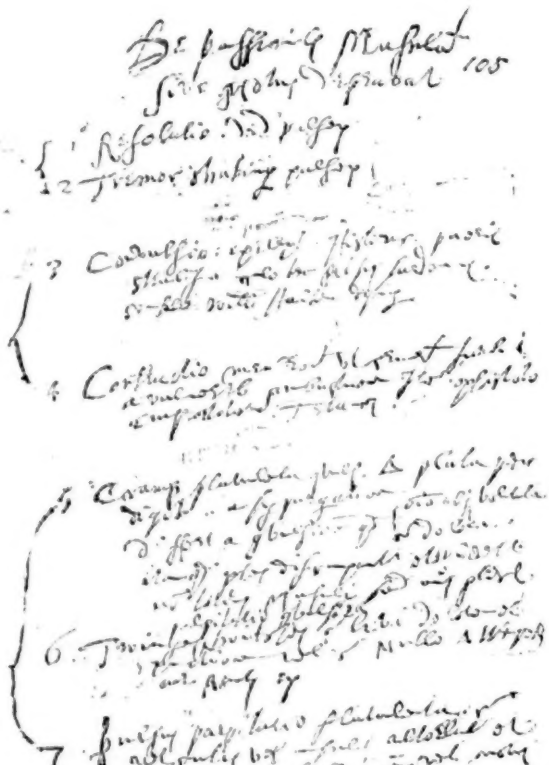
An Cerebrum, master; Spina, his mate;
Nervi, boteswayne;
Musculi, saylors?

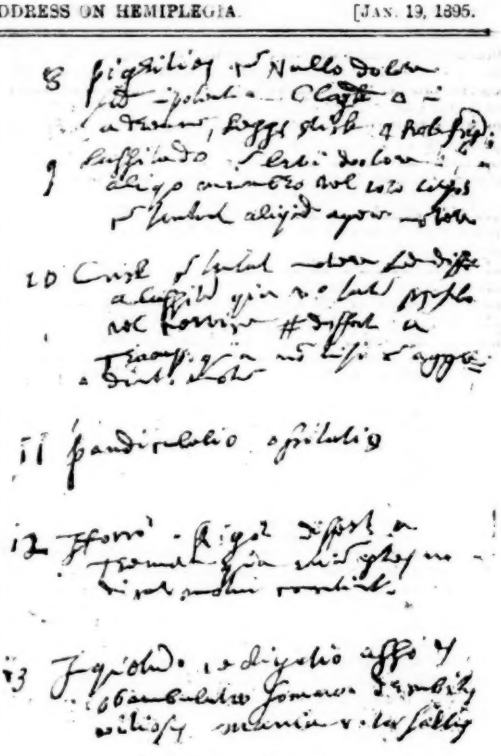
On the opposite page he inclines to another view of the chief command in the human body.

An WH* potius—
Cor, Imperator-rex;
Cerebrum, judex, sergeant-major, præpositus;
Nervi, duces, magistratus;
Ramuli, decuriones, constables;
Musculi, milites?

An Cor, captayne, factor, owner;
Cerebrum, master of the ship;
Nervi, masters' mates, boys, officers;
Musculi, nautæ?

And in a long note, of which I have had a photograph taken, he lucidly distinguishes several morbid conditions of the nervous system. As the reproduction gives the full text, I have not tried to do more than make the headings clear.





De Passionibus Musculorum.

1. Resolutio, ded palsey.
2. Tremor, shaking palsey.
3. Convulsio, epilept. histeric; pueris strabism. oculorum. Risus sardonicus: Uncle Will Halse dying.
4. Contractio membrorum ut cruram a vulneribus combustione item, opisthotonos, emprosthotonos, tetanos.
5. Cramp.
6. Twinges, palpitatio convulsiva; twitches.
7. Pulsus palpitatio flatulenta.
8. Pigrities cum nullo dolore sed impotentia.
9. Lassitudo.
10. Crick, distinct from lassitudo and cramp.
11. Pandiculatio, ossilatio.
12. Horror, rigor.
13. Inquietudo; obambulatio somno, decubitus vitiosus; mania. Vitæ saltus.

Harvey died on June 3rd, 1657, and on Feb. 2nd, 1658, Dr. John James Wepfer finished his "Observationes Anatomicæ ex Cadaveribus eorum quos sustulit Apoplexia, cum Exercitatione de ejus loco affecto," published at Schaffhausen in that year. He was an enthusiastic morbid anatomist, and says in his preface: "To soil the hands with blood and gore seems to some a mean and low occupation, but a little water can wash away this disgrace. Ignorance of things anatomical is far more shameful which ensures discredit to ignorant physicians and surgeons which neither the Rhine nor the Ocean can wash away." He describes four cases of apoplexy, and proves that it may be due to cerebral hæmorrhage, which is not caused by external injury, but by internal morbid change, a notion familiar to us but quite new in his time. He afterwards added more histories, and the candour with which he states cases which he cannot explain and which may tell against his argument shows his scientific merit. His prolixity of style has, perhaps, made him less read than he deserves. English medical writers of his time allude to him so little that I was pleased to find a copy of his book in an old library in the Highlands of Scotland, bought when new by the chief of the clan as worthy a place in the family collection of books. In a later edition of this excellent book (Amsterdam, 1724) cases observed by other physicians are appended, and among them one which must be interesting to everyone who has studied medicine—that of the physician whose memory is daily celebrated in schools of medicine in relation to the skin, the spleen, and the kidney, Malpighi. In the colleges at Cambridge it is customary in each to set apart one day in the year to the commemoration of benefactors.

* WH is his usual indication that he regards a statement as especially his own.

The members of the college meet in the chapel, the roll of benefactors is read and a sermon delivered on their merits, and a feast in the college hall concludes the observances of the day. The commemoration of benefactors to our study, if less ceremonial, is more frequent. In what school of medicine is the name of Glisson not mentioned daily? His capsule is a mantle of fame. Lower is prominent by his tubercle; the circle of Willis keeps him in touch with his profession, though he has been dead more than two centuries; the antrum which Highmore explored is a refuge for him from forgetfulness; nor is Tulp more set forth to future ages by the brush of Rembrandt than by his daily mentioned valve; Wharton along his duct, the second Monro through his foramen, pass to scientific immortality. Malpighi was aged sixty-six, and had had gout as well as the cardiac signs of chronic interstitial nephritis and of renal calculus when, on July 25th, 1694, he was attacked by apoplexy followed in four days by right hemiplegia. He lingered till Nov. 29th, and then died with a fresh access. Post mortem the left ventricle was found two fingers thick, the right kidney with dilated pelvis, a small calculus in the bladder, two pounds of black blood in the right cerebral ventricle, and yellow fluid in the left. The bloodvessels of the brain were dilated. The post-mortem examination was made by the well-known Dr. George Baglivi.

In 1664—six years after Wepfer's book—the "Cerebri Anatome" of Dr. Thomas Willis was published in St. Paul's Churchyard, a frequent place of publication for books at that time, but one especially appropriate to this anatomy, in which several of the drawings were from the hand of Christopher Wren. Eager for all kinds of knowledge, Wren had made both dissections and drawings for Willis. This book thoroughly investigatees, as a result of original dissection, the anatomy of the nervous system, but adds nothing to its morbid anatomy. Thenceforward the anatomy of the brain was well known to all students of medicine through Willis's book. Dr. Richard Lower is thanked by Willis in his preface, who acknowledges "et cultelli et ingenii aciem" (the sharpness both of his scalpel and his mind). Wepfer had demonstrated the anatomy of apoplexy in 1658; Lower in 1664 knew thoroughly the normal anatomy of the brain. Yet so little had the importance of Wepfer's discovery been recognised in England that when Charles II. in 1685 died with the symptoms of apoplexy, cerebral hæmorrhage was not mentioned as its cause; nor when at the necropsy the brain was found "in great disorder," so that "no judgment could be made concerning it,"[10] and with actual hæmorrhage visible, did Lower or any of the other physicians present point out that the hæmorrhage had caused the disorder of the brain, and that both were the cause of the apoplectic symptoms. The king was aged fifty-three. Bishop Burnet,[11] who had conversed with many of the eye-witnesses of the facts, states that he had been out of sorts on Feb. 1st, 1685, and had eaten little. He had a restless night. Sir Edmund King, one of his physicians, came in the morning and, Burnet's account shows, found him in a condition of partial aphasia. "The doctor concluded," says Burnet, "he was under some great disorder either in his mind or in his body. The doctor, amazed at this, went out, and meeting with Lord Peterborough, he said the king was in a strange humour, for he did not speak one word of sense." When he went back with Lord Peterborough "the king, who seemed all the while to be in great confusion, fell down all of a sudden in a fit like an apoplexy." Sir Edmund King knew a good deal about the brain, for he had dissected a hundred human brains.[12] He bled the king, who became conscious, but when put to bed seemed oppressed and on the verge of another fit. On Feb. 5th he had another fit. The physicians said he would not live, and he died on the next day at 11 A.M. The exhortations of Sancroft and of Ken, the questions of James, the offices of Huddleston, and the numerous set remarks the king is reported to have made were occurrences of the period between the second seizure and his death. In the extended reading on which Lord Macaulay's account of Charles II.'s death is based there is one obvious omission. The great historian seems never to have considered the medical aspects of the case or the probability of a man dying from cerebral hæmorrhage, of which the first indication was partial aphasia, making neat or thoughtful replies during the last twenty-four hours of his life. Much of the evidence as to the king's state of mind and sayings is open to the objection that, though it was that of eye-witnesses, it was written down long after the event. No witness had better opportunities of observation than James II., who was at the King's bedside when he died and for many hours of his illness. His "Récit de la Mort du feu Roi d'Angleterre Charles II."[13] was made to the nuns of Chaillot on Sept. 10th, 1692. He had no doubt as to the apoplexy. He is anxious to make clear his brother's rejection of the ministrations of the Anglican divines and his explicit acceptance of those of Father Huddleston. Reading the account in the light of our ordinary experience of such cases it seems probable that Charles could express assent and dissent, that a murmur and a nod were the actual indications which are represented in the account of James by the words "I would give all I have in the world to have a priest"; and that the drawing aside of the bed-curtains, of which James says "pour voir, dit-il, lever le soleil pour la dernière fois," was not asked for in this form but suggested by some murmur and restless gesticulation of the left arm. The "Récit" itself contains evidence that James had varied in the details of his account. The reason most likely was that it was an interpretation of Charles II.'s movements and expressions and not a precise report of words, which were probably few, disjointed, and inappropriate to the meaning obviously intended. The chief interest of the King's case is that its history throughout shows how little knowledge was prevalent on the subject at the time in spite of the discoveries of Wepfer and the careful dissections of Willis and Lower.

It is interesting to note Burnet's account of another case of aphasia in the same period, that of Archbishop Tillotson, "who was taken ill," says Burnet, "of a fit of a dead palsy in November while he was in the chapel at Whitehall on a Sunday. He died the fifth day after he was taken ill. His distemper did so oppress him and speaking was so uneasy to him that though it appeared, by signs and other indications, that his understanding remained long clear, yet he was not able to express himself so as to edify others."[14]

The case of Dr. Samuel Johnson in June, 1783, is an interesting example of aphasia without any hemiplegia and with slight agraphia. He describes the attack in a letter to Mrs. Thrale written two days after it, and less fully in two letters, one to Mr. Edmund Allen, the other to the Rev. John Taylor, both written on the day of the attack.

"I went to bed," he says in the letter to Mrs. Thrale, "and in a short time waked and sat up, as has been long my custom, when I felt a confusion and indistinctness in my head, which lasted, I suppose, about half a minute. I was alarmed and prayed God that however he might afflict my body he would spare my understanding. This prayer, that I might try the integrity of my faculties, I made in Latin verse. The lines were not very good, but I knew them not to be very good. I made them easily and concluded myself to be unimpaired in my faculties. Soon after I perceived that I had suffered a paralitick stroke and that my speech was taken from me. I had no pain and so little dejection in this dreadful state that I wondered at my own apathy, and considered that perhaps death itself when it should come would excite less horror than now seems to attend it. In order to arouse the vocal organs I took two drams. Wine has been celebrated for the production of eloquence. I put myself into violent motion and, I think, repeated it; but all was vain. I then went to bed and, strange as it may seem, I think, slept. When I saw light it was time to contrive what I should do. Though God stopped my speech he left me my hand; I enjoyed a mercy which was not granted to my dear friend Lawrence, who now, perhaps, overlooks me as I am writing and rejoices that I have what he wanted. My first note was necessarily to my servant, who came in talking, and could not immediately comprehend why he should read what I put into his hands. I then wrote a card to Mr. Allen that I might have a discreet friend at hand to act as occasion should require. In penning this note I had some difficulty; my hand, I knew not how nor why, made wrong letters. I then wrote to Dr. Taylor to come to me and bring Dr. Heberden, and I sent to Dr. Brocklesby, who is my neighbour. My physicians are very friendly and give me great hopes; but you may imagine my situation. I have so far recovered my vocal powers as to repeat the Lord's Prayer with no very imperfect articulation. My memory, I hope, yet remains as it was; but such an attack produces solicitude for the safety of every faculty."[15] In a letter written a fortnight later to

[10] Burnet: History of his own Time, vol. i., p. 610. London, 1724.
[11] Ibid., pp. 606-10.
[12] Philosophical Transactions, 1686.
[13] Manuscript copy in British Museum (Additional, 34,501), p. 15.
[14] Loc. cit., vol. ii.
[15] Boswell: Life of Johnson, vol. ii., p. 459. London, 1791.

Boswell he mentions that he "could say *no*, but could scarcely say *yes*"—a peculiarity which, as far as my experience goes, is commoner than the converse condition in cases of aphasia. When Dr. John Cooke, physician to the London Hospital, in 1820 published his "Treatise on Nervous Diseases," no further advance had been made, although, of course, the great discovery of Sir Charles Bell already worked out, though not yet fully set before the world, was the first step towards a future rapid advance. How rapid and how great that advance has been a comparison of the two volumes of the treatise of Dr. Cooke and the two volumes of Dr. Gowers' "Manual of Diseases of the Nervous System" will clearly show. In the earlier book the minute structure of the nerves, cord, and brain are all unknown, and nothing clear is stated of their functions. The advances on the anatomy of Willis of 1664 are few and insignificant, and his views of the functions of the brain, if not accepted, are certainly not replaced by any other opinion. No trace of the careful distinction of diseases and of their localisation in the brain is to be found. Aretæus[16] had noticed in the second century that the pupils in paralysis were sometimes contracted and sometimes dilated, and Dr. Cooke can say nothing further on the point. In the seventy years between Dr. Cooke and Dr. Gowers the whole minute anatomy of the nervous system has been described, its gross anatomy revised throughout, and the subject of cerebral topography created, besides numerous other conversions of absence of knowledge or of doubt into certainty by the general advance of pathological science.

The discoveries of Bouillaud, of Dax, and of Broca in relation to aphasia are among the most important in direct relation to hemiplegia; but having brought you to the time when apoplexy and hemiplegia have ceased to be names of diseases and are regarded as symptoms of some morbid condition which remains to be investigated, I propose to offer to you a few disconnected observations on subjects which seem to me at present deserving of further investigation in relation to varieties of hemiplegia.

I. *Aphasia.*—1. In the past year in St. Bartholomew's Hospital I had under my care a man aged sixty-three years who had an attack of fainting, followed by left hemiplegia. He was completely aphasic, but in two days had nearly recovered the power of speech and in a week had no defect either of speech or motion. When convalescent he amused himself as he sat up in bed by drawing portraits and caricatures of some merit, and always with his left hand. Sir George Paget published a case of aphasia with left hemiplegia in a left-handed man; but as such cases are sometimes open to the interpretation of multiple lesions, which mine, I think, was not, it seems desirable that more should be recorded. 2. Another point in relation to aphasia which seems to call for a careful collection of facts is the correlation of the patient's previous linguistic attainments with the degree of his loss of speech, and after death with the precise nature and extent of the lesion. In a family well known to me medically, and all of whom had an ability of expression considerably above the average, one member, a man nearly sixty, had an attack of right hemiplegia (undoubtedly due to embolus). He recovered so as to be able to walk and to use his right hand well, but continued aphasic to the end of his days. He had no verbal deafness. Before his attack he could speak and write four languages besides English—viz., French, Spanish, Portuguese, and Dutch. He knew all of them well—French, for he had resided for some years in an out-of-the-way part of France and had married a French lady; Spanish and Portuguese, for he had served in the Peninsula under Wellington, and had there commanded a Portuguese force; Dutch, for he had held an important office which took him into many parts of Cape Colony, and required him to be in constant communication with the Dutch residents there. Of all these tongues he was only, after his attack, able to use three words—*exactly*, which he used for assent (he shook his head for "no" and never used "yes"); *sea*, which he used to express or rather to suggest to his hearer any idea in relation to the numerous foreign countries in which much of his life had been spent; and *God*, which he used in relation to every kind of religious idea. He was able to write his name, but was otherwise agraphic. Once when he had in vain endeavoured to make some of his family understand what was in his mind he went down (in illustration of his thoughts) on his hands and knees and plucked some grass with his mouth. "You mean," said a clever sister, "that you feel like Nebuchadnezzar." "*Exactly*," he replied, rose, and continued his walk with her. He had with his sisters learnt to dance in childhood in Portugal with a family—natives of Lisbon. One day while out walking with his two sisters, one of them said, forgetting his aphasia, "Do you remember the name of the family with whom we learned dancing in Portugal?" He smiled and shook his head. His sister affectionately apologised. They went on and his sisters talked together. They had been walking for some time when they passed, near a farmyard, an old iron pot lying on its side. He stopped them, and struck it with his stick. They did not understand. He waited and struck it again. Then he walked a few steps of a minuet, and struck the iron pot again. His elder sister said, "You mean that Caldero (a cauldron in Portuguese) was the name of the family with whom we learned that dance." "*Exactly*," he replied. 3 It is a general and, I think, a well-grounded opinion that if some improvement does not take place early as regards aphasia there is unlikely ever to be much restoration of speech. John Locke, the philosopher, who was a Bachelor of Medicine of Oxford and who had given much thought to medicine, had observed this, as is clear from a passage in one of his letters in which he says that his experience is that if bleeding does not produce an improvement soon as regards speech it seldom does so at all. Precise observations as to the rate and degree of improvement in aphasia are much needed. 4 The close observation of the slight degree of verbal failure which sometimes follows fatigue, even in the young, is also a desideratum, as is the record of verbal habit. 5. Was the "Est-il possible?" of Prince George of Denmark, Queen Anne's husband, a mere reflex? If not, what was its remote connexion with any true idea? 6. Everyone knows how a boy, warned not to make a particular verbal error such as a false quantity, is liable from mere anxiety to avoid it (as it seems) to fall into it a second or even a third time. A series of precise notes on this subject would be valuable. 7. Finally, as regards speech, is it not worth the careful attention of the learned whether the regular variations included under the term of "Grimm's law" may not better be accounted for in relation to the third frontal convolution than as has hitherto been proposed in relation to the formation and muscular peculiarities of the larynx? In the same relation perhaps may lie the explanation of the varieties of syntax in the speeches of different nations. In English the verb usually follows its subject, in Gaelic it generally precedes it, in Latin it stands at the end of the sentence, and in German, when a full stop is at last reached, a preposition is often found to be the last word of all. Every family, every individual, has a peculiar language under the direction of a peculiar third frontal convolution. May not a constant variation and grouping of similar variations in that part of the brain be at least one factor of the idiom of expression of a race?

II. *Hemiplegia of children.*—This affection is no doubt sometimes not cerebral, but due to anterior poliomyelitis; but apart from cases due to cerebral tumour some examples are undoubtedly due to the same causes as adult hemiplegia—at any rate, to embolus, hæmorrhage, or gumma. I have never met with an example of the last post mortem in a child; but since I have found well-marked large gummata in the liver of a child, a condition of which several examples are recorded, there seems no improbability in a similar condition occurring in the brain of a child as it does in that of an adult. I once saw a child who had become hemiplegic (on the right side) about an hour before, after a violent fit of whooping-cough. I suspected the onset of tuberculous meningitis. The child was aphasic, but in a day or two some improvement appeared, and the patient ultimately lost all signs of paralysis, not rapidly, but in course of years, and the slight aphasia, which remained for some months, ultimately disappeared too. Was this condition due to superficial or capsular hæmorrhage or to embolus? I suspect the former from the extreme engorgement of the face during the cough. Cortical injuries during birth leading to hemiplegia are often spoken of, but both in this case and in that of the spastic paraplegia of children sometimes also attributed to such injuries I am inclined to doubt whether bruising of the cortex is likely to be an explanation of the symptoms. The children with spastic paraplegia are generally more or less mentally defective, and as regards the hemiplegia what an extensive and severe cortical injury would be required to produce it. Post-mortem evidence as to such cases is much needed. Some are perhaps due to arrested cerebral development: a hæmorrhage due to a scorbutic condition may account for others, embolus of course for some.

III. *Transient hemiplegia.*—This is an interesting symptom.

[16] Aretæus (ed. F. Adams). Chronic Diseases, book i.

Hysterical cases are not very common, but I once saw a woman aged about twenty-six years who believed that she had just become hemiplegic. There were no facial or lingual symptoms, but her arm and leg seemed powerless. They were of unaltered temperature and reaction, soon recovered, and never became paralysed again. A child aged five years with a solid lung became hemiplegic, being at the time nearly unconscious and roused with great difficulty. Tuberculosis seemed imminent, but after a fortnight consciousness returned and the child slowly recovered. Was this due to a meningitis associated with the pneumonia? Whatever the cause its effects passed off completely.

IV. *Hemiplegia in tubercular meningitis.*—This does not necessarily indicate tumour. A man aged twenty-one years became suddenly delirious, having been in a febrile condition for a few days. He was admitted to St. Bartholomew's Hospital and in a few days more became hemiplegic on the left side, and continued so till his death. I examined him post mortem. He had no tumour, but tubercular meningitis with general tuberculosis throughout his body.

V. *Post hemiplegic state.*—Lastly, how much room for interesting study is there of the state of patients after hemiplegia. "Nunquam tamen fuit ita subtilis ingenii et bone memorie sicut prius," says Mirfeld of the Canon after his cerebral injury. Let us recall, too, the Archbishop of Granada in "Gil Blas." Le Sage certainly described him from the life. The Archbishop, a famous preacher, desired Gil Blas, his secretary, to let him know if he ever noticed in him any signs of intellectual failure. The secretary almost doubted the possibility of such a thing, but the prelate insisted. "Je te le répète, Gil Blas, dès que tu jugera que ma tête s'affoiblira, donne m'en aussitôt avis."[17] Two months later he had a fit of apoplexy, from which he recovered in a few days "mais son esprit en reçut une rude atteinte." Gil Blas noticed the marked inferiority of the very first sermon the Archbishop preached after his recovery. Subsequent sermons were diffuse and wordy, quite unlike his former dignified oratory. Everybody noticed it. Gil Blas told him of it and was dismissed, for the Archbishop himself was sure that he was as great a preacher as ever and that it was his secretary whose ability was failing. Not only the failure of power of the patient after apoplexy, but his vanity—more obvious after than before the attack—are true to nature. In this period of the disease how great is sometimes the difference between the condition after hæmorrhage in the latter half of life and that after embolus in the earlier half of life. It is often the difference between a general disease and a local injury. The cerebral softening or hæmorrhage is merely the end of a series of degenerative changes, and when its immediate effect is over they remain. Sometimes a man whose daily work is intellectual struggles on after he has recovered, as we say, from a cerebral hæmorrhage. He may do some work, but in the cases which I have seen the work was never again of the best kind, never more than a reflection, more or less indistinct, of his past work. Uneducated men seem to bear such attacks better than educated ones, and I have seen cheerful and fairly vigorous out-patients who had a partially recovered hemiplegia, such as in an educated man would probably be associated with a seeming loss of all the sunshine of life. My own observation is that the weakness following hemiplegia, while it diminishes the creative and working power of all minds, has a much less deteriorating influence on patients of fixed principles and opinions than on those whose virtues are chiefly dependent on their surroundings and who have lived without ever considering or determining the problems of life.

In the prevention of such illnesses as hemiplegia due to softening or to hæmorrhage we have to impress upon our patients that, whatever the kind of toil exacted from the mind and body, most may be done by avoiding the doing in any day more than that day's strength is equal to, and that overstrain means diminished efficiency, sometimes at the moment, always if the whole working period of life be considered. I am thinking of useful work, but we must remember that the work with which men fatigue and wear out their tissues is not always useful work: feasts and deep potations, these are toils which break down the blood-vessels and the brain, and of which we can at least advise our patients to consider the cost. Real work of mind and body, even if severe, takes less out of the frame than what may be called forced tissue change; but if its limits are made clear to each man we shall do much to save him from hemiplegia.

The ancients had no clocks with hands, and their hours, which they named by the successive letters of the alphabet, were merely divisions, varying with the solstice, of the time between sunrise and sunset. Z H O I were therefore afternoon hours, and hence the saying:

> Ἓξ ὧραι μόχθοις ἱκανώταται: αἱ δὲ μετ' αὐτὰς
> γράμμασι δεικνυμέναι Ζ Η Θ Ι λέγουσι βροτοῖς.

(Six hours are enough for work: those that are marked by the letters Z H O I say to mortals "LIVE.") With our advanced, if yet incomplete, knowledge of the functions and disorders of the nervous system and of the whole body, to maintain the doctrine of cheerful relaxation expressed in this proverb is one of our first duties as medical advisers. I hope that this address has not been so severe as to prevent your Medical Book Society's evening from being a relaxation, nor so light as to be undeserving of its attention.

[17] Histoire de Gil Blas, vol. iii., p. 140. London, 1782. (This volume was first published in 1724.)

THE SPOROZOA OF VARIOLA AND VACCINIA.[1]

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IT has been found that if a scratch is made in the cornea of a rabbit or a guinea-pig with the point of a sterilised knife, and then a little active vaccine lymph is laid on the scratch, cell infection occurs.[2] I have made the experiment seven times with a positive result in each case. What is understood by the term "cell infection" will be best conveyed by a detailed account of the histological changes which follow the inoculation. If the animal is killed forty-eight hours after vaccination and the cornea is at once excised and placed for twenty-four hours in a saturated solution of corrosive sublimate, and then prepared in the usual way, vertical sections show cell inclusions lying close to the nuclei of the deeper epithelial cells at and in the vicinity of the seat of inoculation. These cell inclusions are minute highly refracting bodies, which stain deeply with acid hæmatoxylin, but show a preference for such stains as carmine, eosine, and acid fuchsine. The appearance of one of the epithelial cells in a section stained with hæmatoxylin is shown in Fig. 1. Most of the cell inclusions are homogeneous, but some have in their dense substance a central denser spot. Many of the bodies give evidence of subdivision into two similar parts. Some of the cells contain two such bodies. There is nothing in the above-mentioned bodies which would exclude the possibility of their being due to some form of degeneration.[3] The facts, however, that amœboid movement has been observed in these bodies and that their presence is dependent upon previous vaccination point to their being intra-cellular parasites, and their peculiar density and high refractive index also agree with what I have described as features of certain sporozoa. If they are parasitic it is necessary to inquire to what group of organisms they may belong. The chief groups of unicellular parasites which pass part of their existence within the cells of their host are the chytridiaceæ, the synchytriaceæ, some of the suctoria, and the sporozoa. The chytridiaceæ are regarded as fungi devoid of mycelium. They occur in some algæ and other plants. The synchytriaceæ, hitherto regarded as vegetable organisms belonging to the chytridiæ, are now considered by Zopf[4] as

[1] The literature relating to this subject is given fully by L. Pfeiffer in Behandlung und Prophylaxe der Blattern, Jena, 1893; reprinted from the Handbuch der Specielllen Therapie, edited by Penzoldt and Stintzing. It should be added that Lionel Beale described the amœbæ of Van der Loeff in the Quarterly Journal of Medical Science, vol. iv. (old series), but without suspecting their parasitic nature.

[2] Guarnieri, led by the observations of Van der Loeff and L. Pfeiffer, was the first to test and demonstrate this fact, and at the same time to confirm the earlier descriptions of L. Pfeiffer, who soon confirmed Guarnieri's observations, and added a detailed description of the movements exhibited by the intra-cellular parasites in the presence of weak methyl-blue solution.

[3] Cohn (1872), Weigert (1874), Pohl-Pincus (1882), Planth (1883), Leloir (1886), Unna and Burri (1892), L. Pfeiffer points out, have previously described these bodies under various names in variola and vaccinia, sheep-pox, varicella, and herpes zoster.

[4] W. Zopf: Beiträge zur Physiologie und Morphologie niederer Organismen, Heft 3. Leipzig, 1893.

probably belonging to the protozoa. This view would approximate them to the two remaining groups. They are parasitic in many plants. Some of them have flagellate swarm spores. The common actinetа may be given as an example of the suctoria, some species of which enter the bodies of other protozoa and there subdivide into ciliated spores. It may prove that they are linked to the sporozoa by intermediate forms. As far as is known they are confined to other protozoa as hosts. The sporozoa are probably most nearly related to the ciliata, and are necessary parasites. They are met with in the metazoa from the tapeworm upwards. The name of the group was derived from th

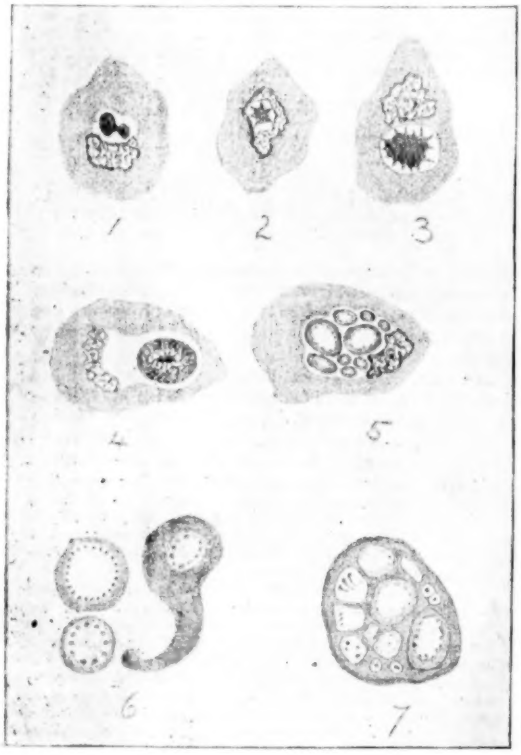

FIG. 1.—Epithelial cell containing a parasite, which is undergoing fission. Rabbit's cornea forty-eight hours after vaccination.
FIG. 2.—Epithelial cell containing a parasite with radial processes. The parasite appears to be intranuclear. Guinea-pig's cornea, seventy-second hour.
FIG. 3.—Larger intra-cellular parasite. Same source.
FIG. 4.—Intra-cellular parasite with central reticulated zone. Same source.
FIG. 5.—Epithelial cell containing a group of small bodies resulting from the subdivision of an intra-cellular parasite.
FIG. 6.—Three free parasites. Two have a well-marked "peripheral granule layer," the third is club-shaped. Same source.
FIG. 7.—A large free parasite undergoing subdivision into spores. Same source.
Acid hæmatoxylin and eosine staining. The bodies were drawn with a Zeiss's $\frac{1}{12}$ in. immersion lens, for the loan of which I am indebted to the Scientific Grants Committee of the British Medical Association. I also wish to thank my friend Mr. A. F. Bill for the loan of a Zeiss's stand and lenses.

hard-shelled bodies known as pseudo-navicellæ, the sporo-cysts of certain gregarines. In some of the sporozoa, for instance, the sarcosporidia and the so-called psorosperms of the human urinary tract,[5] hard-shelled spores (sporo-cysts) have not been met with, and thus the name of the group is no longer completely applicable. Similarly, sickle-shaped spores are not a necessary phase. They are absent in the myxosporidia, the microsporidia, &c.

The decision of the position in classification to be assigned to any newly described organism must ultimately rest with biologists; but since for the past three years I have devoted most of my leisure to the study of the comparative morphology of intra-cellular parasites I may perhaps be permitted to express my view of the bodies I am now considering and to give the basis on which that view rests. The few features already sketched would certainly not suffice to refer the bodies either to the protophyta or the protozoa. The vaccinated cornea at the end of the third day is admirably suited to afford additional evidence, which consists in the presence of a variety of organised structures constituting an extension of the series shown in Fig. 1. Thus, besides the small parasites, such as are represented in Figs. 2 and 3, others similar to that shown in Fig. 4 appear with a central reticulated zone.[6] There is also evidence that these cell inclusions break up into highly refracting segments. An instance of this is shown in Fig. 5. This intra cellular group of bodies I regard as the result of subdivision rather than of multiple infection on account of their arrangement, staining reactions, &c.[7] The gradation of forms already portrayed not only favours the supposition that the bodies are parasitic but that they belong to the sporozoa. If this is the case there should be present, besides the intra-cellular bodies, ripe or adult parasites which have escaped from their host cells and lie free on the surface or in the interstices of the epithelium, for all the known sporozoa without any exception when infesting epithelium present such free bodies. Free parasites, as I may now justly term them, abound in the vaccinated cornea on the third day. Some are in the form of large round, oval, or pear-shaped (Fig. 6 to the right) cells of the same general characters as the bodies I have described as free sporozoa in cysts of the ureter and various cancers and sarcomata; they have a central granular portion surrounded by a dense ectosarc.[8] Others of the free parasites present an appearance characteristic of sporozoa—namely, a clear central part bounded by a distinct zone of granules.[9] Two parasites with this peripheral granule layer are shown in Fig. 6 to the left. Lastly, I will mention large free parasites which have evidently undergone subdivision into segments some of which are granular, others possess nuclear matter either in the form of fragments or radiating bars. Such a body is shown in Fig. 7.[10] After the most careful consideration I have come to the conclusion that the larger segments of such bodies may be taken to represent sporogonia, and the smallest spores.

Such an extended series of forms fully warrants the conclusion that the bodies are parasitic and justifies our placing them, at least provisionally, among the sporozoa. The bodies described above as sporozoa present the most complete homology with bodies I have described also as sporozoa in cancer[11] and sarcoma. The invasion of leucocytes in the vaccinated cornea begins on the third day. There is nowhere the least ambiguity between leucocytes and parasites. Appearances which may be construed as phagocytosis are present, but not very abundant.

Dr. T. F. Ricketts kindly afforded me an opportunity of examining the contents of variola vesicles and the skin of persons who had died from small-pox. In both situations I was able to find bodies identical in structure with those I have described above in the vaccinated cornea. Until the nature of these structures is settled, and the minds of pathologists are familiar with their presence and meaning, it would be premature, perhaps, to discuss the question of the relation of the parasites to variola and vaccinia. I may, however, refer to the importance of the observations made

[5] Jackson Clarke. Transactions of the Pathological Society, 1892.

[6] This figure may be compared with the cell inclusions figured by me in squamous epithelioma (Morbid Growths and Sporozoa, Figs. 6 and 7), and in cancer of the breast (Ibid., Fig. 27).

[7] With this may be compared the condition I have shown in squamous epithelioma (Ibid., Fig. 8).

[8] These are the bodies I referred to as probably free sporozoa in vaccine lymph (Medical Press and Circular, Sept. 6th, 1893). L. Pfeiffer has pointed out that these large free bodies show amœboid movement on the warm stage; thus they are distinguished from degenerated cells.

[9] I was the first in this country to describe such bodies as cell inclusions in cancer, and to point out their signification (Medical Press and Circular, Sept. 28th, 1893).

[10] This body is to be compared with that figured by me in squamous epithelioma (Brit. Med. Jour., Dec. 24th, 1892).

[11] My conclusions with regard to squamous epithelioma have been confirmed in certain particulars by Koromeff (Centralblatt für Bakteriologie, March, 1893) and Kurloff (Ibid., March, 1894). Shron of Naples, like the author, regards certain bodies in mammary cancer as parasites (International Congress, Rome, 1893). Müller (Congress of Physicians, St. Petersburg, noticed in Centralblatt für Bakteriologie, April 7th, 1894) confirmed my view of certain bodies in uterine cancer. Pawlowsky (Virchow's Archiv, September, 1893) and Vedeler (Centralblatt für Bakteriologie, 1894) have fully confirmed my work on Sarcoma.

by Van der Loeff and L. Pfeiffer as to the motile flagellate bodies in the blood of persons suffering from these diseases. I will close these brief remarks by stating that in my opinion the processes which take place in the vaccinated cornea and in other lesions of vaccinia and variola are comparable in a remarkable degree to those which I have observed in cancer. The parasites in the latter condition present a more extended series of forms than those of variola; yet in both cases the fundamental characters of the parasites are the same—namely: "At certain stages they resemble recognised sporozoa, the intra-cellular phases being of especial importance. They tend to assume a round or oval form. Their protoplasm is dense and highly refracting and stains deeply with carmine, acid fuchsine, &c. Their nucleus often does not give the reaction of chromatin to acid hæmatoxylin. All stages of swarm-sporing can be observed."[12] Moreover, the same hypertrophy of cell protoplasm and cell nuclei is seen in the vaccinated cornea and in various cancers and sarcomata.

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NOTE ON THE LOCALISATION OF TACTILE IMPRESSIONS IN THE BRAIN.

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THE careful deductions of Exner have, in great measure, bridged over the chasm existing between the radical "localisationists" and the so-called "anti-localisationists." On the one hand, the general principle of localisation has been shown to be correct by the Vienna observer; on the other hand, that narrow limitation of numerous centres to areas not exceeding a few millimetres in diameter, which has constituted such a vulnerable position for the onslaughts of Goltz and Brown-Séquard, must now be considered untenable. Just as the fibre masses of the corona radiata are seen to spread out fan-shaped, and while terminating chiefly in some special cortical districts, yet detach scattered fibres to neighbouring areas, so the fields of cortical function delineated by Exner in his great work [1] are shown to consist of "absolute" and "relative" fields. The former have a constant relation to a given function; the destruction of the "absolute" field for the muscles of the arm is always followed by paralysis of those muscles. The latter have an inconstant relation; the destruction of the "relative" field of the arm muscles which surrounds the absolute field in zones of gradually diminishing intensity sometimes leads to such paralysis and sometimes does not. The various fields of motor and sensory function are also noticed to overlap considerably; the field for the arm dies out within the visual area, and encroaches considerably on the speech field. But a most interesting result of Exner's laborious compilation and comparison of the numerous cases of limited cortical lesion scattered through modern neurological literature is his conclusion that, as a rule, the sensory fields are nearly identical with the motor fields for the same periphery, and he cites this as a remarkable confirmation of the experimental results of Munk, who found his tactile areas in the dog's brain to correspond with the motor areas of Hitzig and Fritsch. Not only do the tactile fields correspond very closely to the motor fields of the same body regions, thus sustaining the anticipation of Meynert that the *rôle* of the cortex is not so much the liberation of an explosive motor force as the mediation of sensations of innervation (*Innervationsgefühle*), but all determinable function areas which on physiological grounds must be considered to require a bond of association in the cerebral mechanism are found to have a regional contact. Thus the symbolic field, that devoted to the registration and liberation of spoken and written symbols, is found to approach the fields of the upper extremity and of the lingual and auditory peripheries.

While our knowledge of the sensory cortical area is daily becoming more satisfactory, that of the course of the sensory tracts connected with the cortical areas in question is very imperfect. We know partly from Veyssière's experiments, and partly from confirmatory pathological observation, that the fibres conveying tactile impressions are chiefly concentrated in the posterior division of the internal capsule. Meynert,[2] whose anatomically based presumptions have in many respects anticipated the results of actual observation, entertained the belief that this portion of the internal capsule was continued in the outer third of the pes pedunculi, the descending pyramidal tract, and reached the posterior columns of the cord through his so-called "upper fine-bundled decussation of the pyramids." On Meynert's hypothesis, then, the connexion between the posterior and "sensory" columns of the cord and the posterior part of the internal capsule was clear. Flechsig,[3] however, showed that the true pyramidal tract has no connexion with the so-called upper decussation, and the conclusion was somewhat hastily drawn that Meynert's theory of a connexion between the posterior columns and the cerebral hemispheres was to be abandoned. In reality, Meynert's hypothetical tract requires but two topographical modifications to accommodate it to what is to-day demonstrable in any series of transverse and longitudinal sections of the brain isthmus.[4] In a transverse section of the medulla oblongata, immediately above the level of the decussation of the crossed pyramidal tract, the raphe of the oblongata is seen to be very much thickened and to consist of fasciculi crossing at a rather acute angle. From the resemblance of the swollen part of the raphe to a fir-cone, whose knobs are represented by the entering fasciculi, I have proposed to designate this—which is identical with Meynert's so-called upper or sensory decussation—the piniform decussation.[5] (Fig. 1.)

FIG. 1.

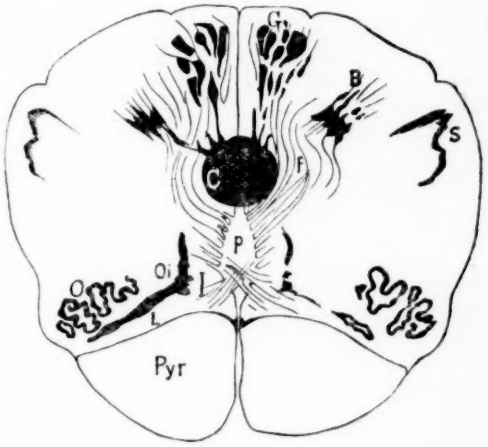


Diagram of section transversely to axis of human oblongata at the level of the inferior end of the olive. O, Olive. Oi, Inner accessory olive. Pyr, True pyramidal tract. I, Stratum intermedium. L, Lemniscus layer receiving crossed fibres from posterior column through P, the piniform decussation. C, Central tubular grey around central canal. G, Nucleus of column of Goll. B, Same of column of Burdach. S, Gelatinous nucleus of ascending trigeminus root. F, Fibres from posterior column and its nuclei to piniform decussation.

Its fibres can be distinctly traced from the posterior columns, fielding off the grey masses of the nuclei of Goll's and Burdach's columns; they cross in the decussation and enter the internal division of the reticular field, dorsad [6] of the pyramids, laterad of the raphe and mesad of the olive. Other of these fibres run into the hilus of the olive and in between the latter and the inner accessory olive constituting the lemniscus tract. I am not able to differentiate between the fibres which have these different destinations, though it

[12] Jackson Clarke: Morbid Growths and Sporozoa, p. 28.

[1] Untersuchungen über die Localisation der Functionen in der Grosshirnrinde des Menschen. Braumüller, Wien, 1881.

[2] Vom Gehirn der Säugethiere (Stricker's Handbook, II.).

[3] Leitungsbahnen &c.

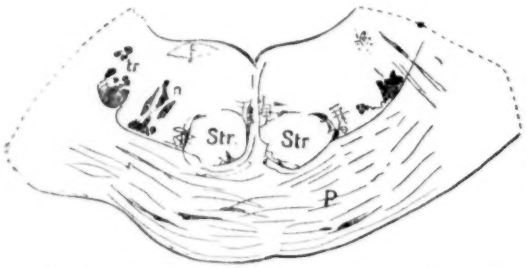
[4] Under this term I include the axial parts of the brain; in other words, everything not comprised in the cerebral hemispheres and the cerebellum.

[5] Architecture and Mechanism of the Brain, Journal of Mental and Nervous Diseases, 1881.

[6] Professor Burt G. Wilder's toponomical terms are used in this paper.

seems that the fibres from the column of Goll mainly go to the field situated between the raphe and olive and dorsad of the pyramid, which is continuous with the stratum intermedium of the pons levels. The stratum intermedium, thus named by Meynert because it lies between the derivative tracts of the pes pedunculi and tegmentum and described by Henle as the "Bündel vom Fuss zur Haube," has been much neglected by anatomists. A careful embryological and comparative anatomical study of this tract cannot fail to throw much light on the cerebral architecture and we would refer provisionally to its enormous preponderance in the elephant, in which animal it appears to have different

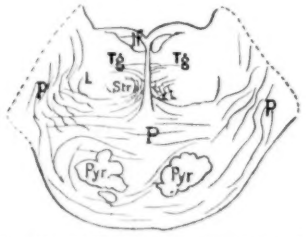
FIG. 2.



Transverse section of pons of elephant two years old, natural size. Str, Stratum intermedium. P, Pons exclusively composed of ganglionic matter and transverse fibres. *f*, Curved part of facial root.

attributes than in man, evidently taking the place of the pyramidal tract, which in this animal is not present, at least in its typical relations, though the pes pedunculi is well developed. The fibres of he stratum intermedium enter the pes pedunculi in its inner third, and constitute one of the deeper fields of the pes described by Flechsig subjacent to the ganglion of Soemmering (substantia nigra). In the course of the imperfect spiral twist of all the pes fibres this field gradually moves to the outer part of the pes, and consequently becomes the most posterior portion of the internal capsule. Meynert's hypothetical tract may be thus re established by

FIG. 3.



Transverse section through human pons. Pyr, Pyramidal fibres. P, Transverse fibres of pons. Str, Stratum intermedium, not distinguishable from L, The Lemniscus. Tg, Tegmentum. lf, posterior longitudinal fasciculus (oculomotor tract).

changing the nomenclature of the sensory decussation and substituting "stratum intermedium" for "outer part of the pyramidal and peduncular tracts." No uncomplicated lesion of this tract is recorded in the literature of focal brain lesions. I have been fortunate to observe one case since I first proposed the rehabilitation of Meynert's theory with the modifications here laid down,[7] and as far as it goes the deductions to be drawn from it coincide remarkably with the anatomical theory. As I propose to publish the case in full when the microscopical analysis shall have been completed, I will here mention only the salient points. A man with moderate indications of atheromatous degeneration of the vascular system had had a sudden "seizure" while straining at stool, accompanied by complete right hemianæsthesia. I examined him two years after the attack, and found that the tactile sense had improved, but not to such an extent as to permit the man to resume his vocation; he had lost the faculty of mechanical coördination without losing the sense of equilibrium or resistance. As there was contra-lateral facial palsy and marked difficulty of speech, approaching anarthria in its character, I diagnosed a hæmorrhage of the pons. Two years before his death he had another seizure of a transient nature, and several lesser ones followed at irregular intervals, the patient dying with terminal symptoms of paraplegia and amblyopia. A number of recent necrotic and cicatrised foci, with several very small hæmorrhages, were found in various portions of the brain; an old pigmented cicatrix was found replacing the right stratum intermedium, and involving the facial nucleus, ending at the raphe.

When it is borne in mind that those centripetal fibres which partly derived from Flechsig's direct myelo-cerebellar tract, and partly from the posterior columns through the olivary decussation, run into the cerebellar hemispheres, and that from the latter the transverse pons fibres originate, to apply themselves to the pyramidal tract and ascend to the brain through the pes pedunculi, it must be apparent that the great sensory tract united or nearly so in the cord, and widely separated in the oblongata and pons, becomes reunited in the pes pedunculi. This relation is best expressed in the diagram Fig. 4. Inasmuch as the sensory tract separates into two

FIG. 4.

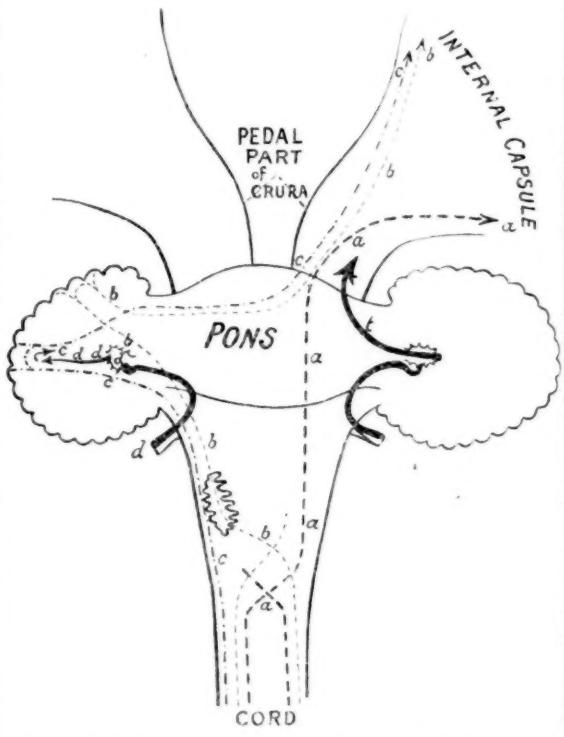


Diagram of the tactile and equilibrium tracts. *a*, Tract from posterior column through piniform decussation to posterior part of internal capsule. *b*, Tract from posterior columns through decussation of olivary fibres to cerebellum, thence through pons to frontal lobes and great ganglia. *c*, Direct myelo-cerebellar tract. *d*, Auditory fibres to dentated nucleus and connexions. *t*, Its continuation to tegmentum.

divisions—one running directly through the brain axis to the posterior capsule, the other deviating from the direct course to enter the cerebellum, which ganglion mediates as a connexion of auditory and posterior column fibre—it seems legitimate to assume that the former division is the tactile and the latter the equilibrium sensation tract. Many doubtful points in the study of ataxic phenomena become clear in the light of this conclusion, particularly the common observation that there is no essential relation between tactile insensibility and ataxia. Another interesting point to

[7] Chicago Medical Review and New York Medical Record, 1891.

determine is the anatomical connexion between the posterior columns and the trineural fasciculus.[8] The trineural fasciculus originates in the piniform decussation; whether its fibres are ultimately derived from the opposite posterior column, and hence connect the posterior columns and the great visceral cranial nerves, or whether they run up into the opposite stratum intermedium, it is difficult to determine. While I am inclined to believe that the latter is the case, the possibility of the former disposition must not be lost sight of. If it becomes established it will explain the remarkable effect which progressing disease of the posterior columns has on the production of gastric, bronchial, and cardiac crises.

TEN CASES OF DIPHTHERIA TREATED WITH ANTITOXIN.

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THE following cases of diphtheria have been under our care at the Evelina Hospital for Sick Children, where we were able to set apart a small isolation ward for their reception, and were fortunate in having a supply of Behring's antitoxin for their treatment. After our third case the supply failed us for a time, and it will be seen that the fourth case was treated with Aronson's antitoxin. A fresh supply of Behring's antitoxin was then received, and the remaining six cases were treated with it. In all the patients the treatment was commenced directly after admission and after a diagnosis had been made, partly on the appearance of the membrane and partly on the amount of depression, and in six of the ten on the small amount of albumen found in the urine. In some of them bacteriological investigations were also made. Two of our cases necessitated tracheotomy. In the first case tracheotomy was performed immediately after admission owing to the urgency of the symptoms; in the other case respiration stopped suddenly while some membrane was being obtained for examination and prolonged artificial respiration was necessary after the trachea had been opened. In the single fatal case death ensued after vomiting a quantity of blood, and the post-mortem examination revealed erosion of a branch of the tonsillar artery. With regard to the symptoms following the employment of antitoxin we noted rapid detachment of membrane and great improvement in the pulse and also in the general condition of the patients. In the fatal case the pulse was weak throughout, and in another case convalescence was marked by an abnormally slow pulse, which, however, improved after the administration of stimulants. This child also exhibited a rash somewhat resembling urticaria, but it was only present for a few hours. The last case treated developed urticaria, which gradually faded after three days. The albumen in the urine was not due to the antitoxin; it was detected in five cases before the treatment was commenced, and in a sixth (Case 1) it was found as soon as a specimen could be procured after tracheotomy. The amount of albumen was small in most of the cases, and it disappeared entirely before the patients left the hospital. It is too soon yet to say much about other sequelæ. So far as our present information goes, in none of our cases have any forms of post-diphtheritic paralysis appeared. Our cases have received the utmost care from our resident medical officers, Mr. W. L. Wainwright and Mr. T. Waddelow Smith, to whom we are indebted for the following abstracts of the notes:—

CASE 1. *Tracheotomy; recovery.*—A badly nourished boy five years of age was admitted to hospital on Nov. 3rd, 1894, in an apparently moribund condition, with extreme dyspnœa and only occasional attempts at respiration. Tracheotomy was performed at once, followed by artificial respiration. The respiration became in a short time fairly good, but large quantities of foul-smelling mucus poured from the trachea. Both tonsils were covered with whitish membrane, and there was much offensive nasal discharge. The glands were much enlarged and there was one-tenth albumen in the urine. The disease was of ten days' duration according to the mother's account. The pulse after operation was 144, the respiration 48, and the temperature 102° F. Behring's No. 2 solution (10 c.c.) was injected at once. The pulse remained about 140 for two days and the respiration from about 36 to 40, but there was rapid and marked improvement in the heart sounds. On the afternoon of Nov. 4th the child was well enough to look at a picture book of his own accord. Large quantities of mucus and several pieces of membrane continued to be coughed up, and the temperature remained between 99° and 100°. On Nov. 6th the throat was quite clean, though still œdematous, the pulse was 120 and full, the respiration 28, and the temperature normal. The tracheotomy tube was removed on the same day, and recovery was quite uneventful, except that a fine trace of albumen remained until the 13th. On the 27th the patient was discharged in excellent condition.

CASE 2. *Death.*—A girl aged eight years was admitted on Nov. 7th, 1894, with diphtheria of two days' history. The tonsils were much enlarged and covered with membrane, as also were the soft palate and uvula. There were great pain on swallowing, profuse sanious nasal discharge, and much swelling on both sides of the neck. The pulse was 140 and very feeble, the temperature 101° F., and the respiration 36. Ten cubic centimetres of Behring's No. 2 antitoxin were injected. The urine contained one-twelfth of albumen. The pulse improved a little and fell to 120. The respiration was 23, and the temperature 98°, but the throat did not improve and the glands increased in size. On Nov. 9th, 10 c.c. of Behring's No. 1 serum were injected. The pulse remained about 120 to 130, but became more feeble, and the first sound could scarcely be heard at the apex. The nasal discharge increased, and though the temperature remained normal, the patient became very cold and the skin clammy. On the 10th she three times vomited a quantity of laminated clot, which appeared to have been lying in the œsophagus for some time and was of a greyish colour. On the afternoon of that day the patient gave a sudden convulsive start and died suddenly, a quantity of black coffee-ground material pouring from the mouth.

Necropsy.—There was very deep ulceration of the tonsils, and the right tonsillar artery was found to be laid open at the base of an ulcer for a distance of one-twelfth of an inch. There was a good deal of blood in the stomach, and the tissues in the submaxillary region were full of extravasated blood.

CASE 3. *Large patch on tonsil; recovery.*—A boy aged six years was admitted on Nov. 10th, 1894, with diphtheria of five days' duration. He was a well-nourished boy with a good family history. There was slight congestion of the tonsils and soft palate, and on the right tonsil there was a large grey patch of membrane. The uvula was clean, but slightly œdematous, and there were enlarged glands in the submaxillary region. The pulse was good, full, and strong, and 98 per minute; the respiration was 32 and not impeded; and the temperature was 104° F. There was no albumen in the urine. Two hours after admission 10 c.c. of Behring's antitoxin were injected into the muscles of the thigh. Three hours later the pulse was 108, the respiration 28, and the temperature 102°, the patient feeling very well. Six hours later the membrane had become almost detached, the patient still feeling very well. Next morning the pulse was 100, the respiration 24, and the temperature 98°. The patient took a hearty meal and did not complain of any pain in the throat. There was no albumen in the urine and the throat had completely cleared. The patient was discharged on the sixth day, being practically well.

CASE 4. *Naso-pharynx; recovery.*—This patient aged ten years was admitted on Nov. 16th, 1894, suffering from a moderately severe attack of diphtheria. The history was of seven days' illness, with sore-throat and general malaise. On admission the pulse was 120, the respiration 28, and the temperature 101° F. There was no albumen in the urine, and the general condition of the child was good. The throat was congested, both tonsils were enlarged and there was on each a small whitish patch of diphtheritic membrane, but none on the uvula or soft palate. There was considerable

[8] "Solitary bundle" of Lenhossek and Stilling, *fasciculus teres* of Lockhart Clark, "Respirationsbündel" of Krause; I term it "trineural fasciculus" on account of its established connexions with the eleventh, tenth, and ninth (and that aberrant branch of the ninth pair, the *nervus intermedius*) cranial pairs.

sanious discharge from the nose. Two hours after admission twenty minims of Aronson's antitoxin were injected into the subcutaneous tissue of the abdomen. Six hours later the pulse was 120, the respiration 36, and the temperature normal. The general condition was excellent. The next morning the pulse was 108, the respiration 24, and the temperature 97°; but there was still a slight patch on the tonsil, with soreness of the throat. After this the patient made a rapid recovery, and was discharged on the sixteenth day after admission practically cured. Besides the antitoxin treatment, a gargle of chlorine was applied locally in this case.

CASE 5. *Severe; naso pharynx; recovery.*—The patient aged seven years, a well-nourished child, was admitted on Dec. 6th, 1894, suffering from a severe attack of diphtheria. The symptoms had been noticed for about three days. On admission the pulse was 140, small, weak, compressible, and very irregular; the respiration was 38, greatly embarrassed; and the temperature was 103° F. The throat was greatly swollen and the patient complained bitterly of pain on swallowing. There was a trace of albumen in the urine and a well-marked fetid discharge from the nasal cavity. On the right tonsil there was a complete layer of a whitish-grey membrane, which did not reach to the uvula or soft palate. On the left tonsil there was a smaller patch. The glands at the angle of the jaw were also enlarged. Soon after admission 5 c.c. of Behring's No. 1 solution were injected into the abdominal wall, but with slight effect, the pulse being 140, the respiration 34, the temperature remaining elevated, and the general symptoms increasing in severity. On the following day, the throat symptoms having become much worse, with great dyspnœa and marked signs of laryngeal obstruction, and the pulse also being very weak, compressible, and irregular, 10 c.c. of No. 2 Behring's solution were injected; this produced marked improvement, the pulse being reduced in four hours to 108 and becoming more regular, the respiration to 32, with less dyspnœa, and the temperature to 99·4°. The next morning the membrane on the throat, which had greatly spread, was nearly detached, the pulse being 120 and much stronger, and the respiration 32, easy, and quiet. The child became quite convalescent and developed no bad symptoms. A chlorine gargle was also used in this case, but antitoxin was the only medicine given.

CASE 6. *Tonsil and uvula, recovery.*—The patient aged three years and nine months was admitted on Dec. 10th, 1894, with sore-throat of five days' duration, which was rapidly getting worse. The throat was congested, the uvula œdematous, and there was a patch of whitish membrane on the left tonsil. There was a faint trace of albumen in the urine. The temperature was 104° F., the respiration 28, and the pulse good (134). On the patient's admission 10 c.c. of Behring's No. 1 solution were injected, and six hours later the pulse was 120, the respiration 18, and the temperature 98°. Next morning the throat was quite clean and the general condition excellent. Since then there has been uninterrupted recovery.

CASE 7. *Both tonsils; recovery.*—The patient, aged two years and eight months, was admitted on Dec. 17th, 1894, suffering from an attack of diphtheria of twenty-four hours' duration. On examination he was found to be a well-nourished child. The pulse was 144, small, and compressible, but quite regular; the respiration was 44, deep and easy, with no adventitious sounds in the chest; and the temperature was 104° F. A faint trace of albumen was found in the urine. Both fauces showed well-marked congestion, with, on the right tonsil, a mass of thick, tough, greyish-white membrane about the size of a sixpenny piece, and on the left tonsil there was a smaller but well-defined patch of the same character. Ten cubic centimetres of Behring's No. 1 solution were injected on the patient's admission, and the throat was swabbed and sprayed with a chlorine water gargle. Three hours afterwards the pulse was 132, fuller, and less compressible, the respiration 32, and the temperature 100°. He slept well during the night and did not complain of any tenderness when swallowing. The following morning the pulse was 120, the respiration 26, and the temperature 99°. The child was looking bright and happy. The membrane on the throat had not spread, and was becoming detached on the edges and of a greyish colour. The same night the pulse had fallen to 100, being good and full. The temperature was normal and the respiration 24, the general condition being excellent. The albumen had disappeared from the urine. Patches were still to be seen on the tonsils, but were rapidly disappearing. Twenty-four hours later the pulse was good, varying between 100 and 110, the respiration 24, and the temperature still normal. There were no patches to be seen on the throat. The child was apparently quite convalescent and taking with relish full diet. The bacteriological cultivations from the throat showed a large number of streptococci and staphylococci, with a few well-defined diphtheritic bacilli.

CASE 8. *Soft palate and tonsil; tracheotomy; recovery.*—The patient aged five years was admitted on Dec. 19th, 1894, and was said to have been ill for nine days. At the time of admission the child was very cold and cyanosed, with scarcely perceptible pulse and much dyspnœa. The pulse was 144, the respiration 36, and the temperature 97·6° F. The lower ribs were being sucked in violently. The soft palate, uvula, and right tonsil were covered with membrane, and the cervical glands were much enlarged. Ten cubic centimetres of Behring's No. 3 antitoxin serum were injected at once. While taking a cultivation from the throat the breathing became suddenly absolutely obstructed, and the child in a moment was flaccid and made no attempt at respiration. Tracheotomy was performed with a single incision, and after several minutes' artificial respiration some attempt at breathing became manifest, and in about fifteen minutes full respiration was restored. An hour later the pulse was 120, the respiration 28, and the colour good. The urine contained about one-thirtieth albumen, the heart dilated moderately, and the lungs were healthy. There was profuse discharge from the nose. The child slept well all night, the breathing being easy and quiet, with little coughing. In the morning the pulse was 144, being fairly good, the respiration 36, and the temperature rose to 101°. Food was well taken. The membrane had cleared off the tonsil, but remained on the uvula and edge of the soft palate. At 9 A.M. the pulse was 120, the respiration 26, and the temperature 100°. The colour was good. The child was well enough to play with toys and look at a picture book. At 9 P.M. the pulse was 124 and the respiration 28. The discharge from the nose had almost ceased. A good deal of tenacious mucus was being coughed up, but no membrane, and the throat looked less swollen and showed less membrane. The cervical glands were much less swollen. The child slept well. The heart sounds were good and the patient was apparently quite comfortable. The cultivations showed Löffler's bacillus and a few cocci. The child subsequently convalesced rapidly with no bad symptoms.

CASE 9. *Diphtheria with pertussis.* — A child aged six and a half years, suffering from pertussis, on Dec. 21st developed feverish symptoms with soreness of the throat. The pulse rose from 120 to 140, respiration from 20 to 40, and the temperature from normal to 104° F. There were vomiting and general malaise, and on examination of the throat it was found to be covered with diphtheritic membrane. The glands were enlarged, but there was no albumen in the urine. Ten cubic centimetres of No. 1 Behring's solution were injected, with the result that the temperature fell to normal in six hours and the feverish symptoms subsided, the child making a rapid and uninterrupted recovery. Bacteriological examination showed diphtheritic bacilli in large numbers, but few cocci.

CASE 10. *Tonsils; soft palate; rash.*—A child aged four years was quite well and attending school the day before admission, but that same night complained of pain in the throat, vomited, and seemed generally feverish. When seen on the day of admission, Dec. 24th, 1894, the patient was a well-nourished child with marked dyspnœa and slight cyanosis, enlarged glands at the angle of the jaw, and some cellulitis of the neck. The tonsils were enlarged and covered with typical diphtheritic membrane, which also extended to the uvula and soft palate. There was no nasal discharge. The temperature was 101·4° F., the respiration was 20, and the pulse was 120, weak, and very compressible; the urine (sp. gr. 1015) contained no albumen, and no urates in excess. Ten cubic centimetres of No. 1 Behring's solution were injected deep into the muscles of the thigh, and three hours afterwards the temperature had fallen to normal, the respiration was 24, and the pulse 120, but fuller. The next morning the patient's dyspnœa had quite disappeared, and the membrane was rapidly becoming detached from the throat; there were no bad symptoms. The following day an urticaria was noticed extending from the site of puncture rapidly over the body, but giving apparently no discomfort to the patient, whose general condition was excellent. Bacteriological examination showed a large number of diphtheritic bacilli.

SOME CASES OF

GRAVES' DISEASE, SUCCEEDED BY THYROID ATROPHY.

BY W. W. BALDWIN, M.D.

IN reporting the following cases I desire simply to record the doubts and perplexities of a busy general practitioner in the presence of strange disease processes. I shall be quite content to have succeeded in relating the facts briefly and clearly, exactly as they occurred, without generalisation. I anxiously realise how difficult and ambitious a task it is to accomplish, but I venture to hope that I have not utterly failed to eliminate the deceptive note of personality and prejudice.

The case which I will first report seems unique, considering the youth of the patient and the comparatively rapid cycle of pathological change. The mother, a very poor but intelligent mountain peasant, brought her lad to me on July 26th, 1893, "not on account of illness, but because he was good for nothing, and perhaps the doctor might be able to rouse him." The lad was one of the heaviest, dullest overgrown boys of ten years of age imaginable, mostly half asleep. He would doze off sitting or standing, like the fat boy in the "Pickwick Papers." His skin was pale, dry, and inelastic, the connective tissue under the eyes loose and baggy, the face broad and flattened, and the hands big and puffy. He had a large, pendulous double chin, his great mass of coarse coal-black hair was dry and brittle, and the cheeks were notably scarlet, as though painted. The temperature was 97° F., the heart's action slow and lagging (55), its sounds were normal although its apex beat was displaced downwards and outwards about half an inch (the probable cause of this hypertrophy of the left ventricle will appear later), and the respiration was slow and deliberate. The liver and spleen were not enlarged, nor were any enlarged lymphatic glands discovered, although the boy was stripped and carefully examined from head to foot. The urine was normal. The appetite was moderate, there was no indigestion, and the bowels were regular. The mother related that several years previously he had suffered from palpitation and breathlessness, swelling of the neck, and prominence of the eyes, that he had also been extremely nervous and sleepless at that time, and it was thought he had heart disease. She "knew that he had been perfectly well until six years of age, and that he first began to swell and resemble the ox about two years ago." My friend, Dr. Milani, an experienced local practitioner of the neighbouring commune, who had referred this boy to me, had never seen a case of cretinism in the region of La Traversa, a primitive mountain resort in the Tuscan Apennines, where I was spending my summer vacation. He had seen this patient from time to time during the heart attack, and assured me that it had been a typical case of Graves' disease. It must be confessed that we were both puzzled as to where the pendulum had swung in this particular pathological clock. An extemporaneous examination of the blood showed a certain diminution of red corpuscles, and acting upon this hint the treatment adopted was regulation of diet and hygiene, with appropriate doses of iron and arsenic. I might add that the patient had been living upon vegetable soup, now and then a bit of cheese, sparingly of sour bread and potatoes, but chiefly upon polenta or ill-cooked maize-meal porridge, without wine. An experimental repast of this inhuman mush had given me a woful indigestion, with such heaviness and mental inhibition as influenced me, no doubt, in forming an opinion of this boy's condition. I seemed to feel just as he appeared. I would say that we furnished him chicken, eggs, milk, a little meat, certain green vegetables and fruit, rice and macaroni, with a moderate allowance of good red wine. The above treatment was continued until Aug. 17th, but without the slightest appreciable effect. At this time a generous provision of various medicaments and drugs arrived from London. Among these was a stock of five-grain tablets of dry thyroid gland powder. It then first occurred to me that our youthful patient had played the gamut of thyroid change in four years, and was now suffering from atrophy and consequent myxœdema. These tablets were now administered. It was found that four daily were well borne, but a larger dose caused palpitation and breathlessness. Strangely enough, the mother remarked when this occurred, "My boy acts just as he did when he had heart disease." The effect of this treatment was markedly favourable from the first, although the improvement was neither so rapid nor so brilliant as in some cases of uncomplicated myxœdema for which I had prescribed the same preparation. The patient came to see me every second day until Sept. 18th, when I returned to Florence. At this time he was more eager and alert, the general puffiness had almost disappeared, the pulse was 70, and the temperature 98°. The boy actually seemed a size smaller. My friend, Dr. Milani, one of the Good Samaritans of the Apennines, then gladly undertook the case, and in his last line of news, March, 1894, he said: "Our patient is perfectly well, and his cure is considered miraculous by all the mountain folk." I would add that the tablets were continued, as Dr. Milani expressed it, "in sufficient doses to keep the boy upon the human pathway."

On May 22nd, 1884, I was called to attend a tall, growing English schoolgirl fourteen years of age. I found her suffering from an acute attack of follicular tonsillitis, with great pain and difficulty in deglutition. This attack lasted until June 1st, happily without suppuration, and the patient made a satisfactory recovery. I observed with surprise and anxiety that while the temperature never rose above 103° F. the pulse varied between 140 and 160 until the febrile disturbance had subsided. From this time until June 12th the pulse varied between 100 and 120. It was then noted that the thyroid gland was moderately and symmetrically enlarged and the eyes rather prominent, but the upper lids could be voluntarily closed over the eyeballs in any position. There was no muscular tremor, but increased pulsation of the carotids was remarked. The diagnosis of Graves' disease presented no difficulty, and a course of galvanism to the cervical sympathetic was proposed in addition to other treatment, but the patient left Florence, and I did not see her again for some time. The mother, a lady noted for her cleverness and capacity in affairs, whom I saw frequently, gave me accounts of the case which I noted down at the time. The daughter grew much worse in England, and seems to have passed through a period of great danger, coincident with the first climacteric, which lasted two years. Under skilful treatment, including galvanism, however, she gradually recovered, and in January, 1890, it was noted that all the symptoms of Graves' disease had finally disappeared. From this time until December, 1891, the patient gradually drifted into a condition which a leading London authority then pronounced to be true myxœdema. In January, 1893, treatment with fresh thyroid gland was undertaken, which has been brilliantly successful in relieving the symptoms, and the patient, by continuing to take an appropriate quantity of the above preparation, has remained comparatively well.

In June, 1887, I attended another schoolgirl fifteen years of age, a short, rather thick-set Italian of the upper class. She had menstruated irregularly for about six months, and previously to this period had always been well and strong. The family history upon both sides was notably neurotic. The thyroid gland was more enlarged and the eyes more prominent than in the case just mentioned, but the pulse was less frequent (90 to 100) and the nervous excitability not nearly so great. A certain coarse muscular tremor of the extremities was noted, and the patient complained of being unable to close the eyes when lying down, so that they were often very dry in the morning. It was found that she could not completely close the upper lids over the eyeballs looking down except by pushing them with the fingers. In this case of Graves' disease it was decided to prescribe galvanism of the cervical sympathetic every other day. The patient was instructed to lead a quiet, restful life and to avoid all excesses. This treatment was continued, with short intermissions, until October, 1888, when menstruation had become regularly established, and recovery from all the symptoms of Graves' disease had occurred. From this time, with the exception of an attack of peripheral facial paralysis (right) due to a chill, from which she also recovered, the patient's general health was remarkably good until November, 1893, when various anomalous symptoms were first noticed, but chiefly of sluggish circulation, mental hebetude, and intolerance of cold. There is no doubt that the thyroid gland had also been growing smaller. No treatment was then undertaken, as the patient left Florence for the winter. She consulted me again in October, 1894, and decided to undertake systematic treatment. There had been no rapid change during the year's absence, but all the symptoms were a shade more accentuated. The temperature,

which had been normal in November, 1893, was now 97·4° F., the pulse had changed from 78 to 65, the skin was paler, drier, and less active, and the patient's whole appearance was indescribably different. If I may be allowed the comparison, she seemed to have merged her former personality into that of a more placid, apathetic, and slightly larger twin sister. As the patient could not be persuaded to continue the fresh sheep's thyroid gland, first prescribed, however prepared, the five-grain tablets already mentioned, of which a fresh supply had arrived, were prescribed. At first three tablets daily were given, cautiously increased to six, which dose it has not been necessary to increase. The effect was satisfactory from the very first, and the patient now (Dec. 10th, 1894) declares herself—and, indeed, appears in all respects—to be perfectly well. She is taking three tablets daily at present, and will remain under careful observation in future. I would add that either the fresh sheep's thyroid or the five-grain tablets have proved so satisfactory in every case thus far that I have not found it necessary to try later and perhaps more elegant preparations. Our present Italian Custom laws also render the importation of pharmaceutical novelties vexatious and difficult.

In June, 1892, a Swiss woman forty-four years of age consulted me. Her history, as noted down at the time, is as follows. She had married young and had borne several children, but the relation had proved a very unhappy one. Until 1883, however, she had enjoyed robust health. At that time she suffered from a great mental shock, succeeded by grievous family complications, which had continued to distress her ever since. In 1889 menstruation became irregular and after a twelvemonth finally ceased. Shortly after the shock mentioned she began to suffer from palpitation, breathlessness, swelling of the neck, prominence of the eyes, great nervousness, and insomnia. These symptoms continued for some months after the final menstruation (May, 1890), but gradually disappeared. She had never submitted to regular systematic treatment, but had taken medicine for hysteria from time to time. She had remarked that both before and after the climacteric all the symptoms were invariably aggravated for the first four or five days of the regular monthly time. Since then she had gradually lost control of her voice, which was sometimes fairly strong and clear, at other times muffled and indistinct, but always losing force. What chiefly distressed her, however, was inhibition of brain power and a sense of overpowering fatigue and melancholy. She slept fairly well, but was never refreshed thereby. There was lack of appetite, but digestion, although sluggish, was fairly good, and the bowels were always constipated. She suffered very much from the cold, and was invariably worse in cold weather. No organic lesions were discovered. The skin was pale, dry, and harsh; the hair was unusually thick, long, and lustrous, but latterly it had been falling out. She complained that the hands and feet were swollen at times, but this I did not observe. The tissue about the eyes was slightly swollen and the cheeks were pale. Her facial expression was notably anxious. The treatment prescribed consisted in attention to diet, regulation of the bowels, and the administration of hypophosphites of iron, strychnine, and quinine with arsenic. This treatment was continued, with intermissions, in Switzerland, where she spent the summer. She was distinctly better when I saw her again in the following November. During the winter, however, in spite of treatment, all her symptoms became aggravated, and in June, 1893, she was distinctly worse than the year before, when I first saw her. Her appearance did not suggest myxœdema, and I could not satisfy myself that atrophy of the thyroid was present, but it was decided to make a cautious trial of the same tablets of compressed dry thyroid gland powder. At first three were given daily, being then increased one at a time to six tablets daily. The effect was simply amazing, and after a few weeks the patient expressed herself, and, indeed, seemed to be, perfectly well. One or two tablets daily have been taken since, and she remains in good health.

Florence.

FOOTBALL CASUALTY.—During a recent match a Notts Forest left wing forward sustained an injury, which on medical examination was found to be a muscular adhesion in the vicinity of the sciatic nerve, and he will probably not recover the full use of one leg for some time.

AN OCCURRENCE OF MILK INFECTION.

BY JAMES NIVEN, M.A., M.B. CANTAB.,
MEDICAL OFFICER OF HEALTH, MANCHESTER.

ON Nov. 7th, 1894, Dr. Henry Ashby sent me a note in reference to a number of cases of illness which had occurred in Victoria-park, Manchester, some of them having come under his professional observation. The symptoms he described were diarrhœa, sickness, and abdominal pain. Those attacked were all supplied by one milk dealer, and he was of opinion that circumstances pointed to the milk as being the cause of the attacks. On that day and the following day I called at a few houses in Victoria-park, the addresses of which I had received from Dr. Ashby, and inquired into the circumstances under which their illnesses had occurred. All the families visited had received their milk from one dealer, and, so far as I was able subsequently to ascertain, all the families attacked in a similar manner at that time received the same supply, and other individuals not so supplied were found to have partaken of that milk. The chief points which I ascertained in the preliminary inquiry were that the attacks in the great majority of instances occurred on the night of Nov. 5th and in the early part of Nov. 6th. As a rule the persons attacked had partaken of unboiled milk. The milk supplied on the morning of Nov. 5th first produced the symptoms. It did not seem to make much difference in the result whether a small amount of milk in tea or coffee, or a large amount, was used. One woman was positive that all milk brought into the house was boiled, and in a number of instances the milk had been warmed. One occurrence of illness after the use of boiled milk is, however, scarcely sufficient to found a conclusion upon, as an oversight might have been made. Thus, at the first house I went to I was told that the children attacked always had their milk boiled, except on that particular morning. In the second house four persons escaped. One had had boiled milk, two others never used it, and the fourth only took a little in tea. The three attacked had had unboiled milk. In a third house ten were attacked and three escaped. Two of these did not have milk at all. Those attacked all took milk freely. At a fourth house a girl who came to clean the steps received a glass of milk, and was subsequently ill with the same symptoms as those attacked in the household. At another house, not in Victoria-park, five members of the family were taken ill—one on the night of Nov. 4th, one on the night of the 5th, and three others on the 7th. This household was the only one in the street supplied by the milk dealer whose milk was concerned. A considerable time elapsed—at least eight or nine hours—between taking the incriminated milk and the occurrence of symptoms of illness.

The conclusion drawn from these preliminary visits was that the phenomenon was probably one of bacterial growth in the body—i.e., of infection—from the use of this particular milk-supply. On Nov. 8th I obtained a sample of the milk supplied on Monday evening from a patient of Dr. Ashby, and took it to Professor Delépine, who very kindly undertook to make plate cultivations from it and otherwise to examine it bacteriologically. This milk had an unpleasant odour. Another sample of the milk supplied on Wednesday, Nov. 7th, which I obtained on a visit to Victoria-park on Nov. 8th, also had a disagreeable odour, which I seemed to recognise at the time but could not locate. On subsequently learning what had happened at the farm I seemed to recollect the odour as resembling that of "sweet pus." On Nov. 8th I also saw Dr. Waddell, of Rusholme, who had visited a large number of cases. On the previous day he called at the farmhouse from which the incriminated milk came, but beyond general insanitary conditions he ascertained nothing, and he was assured that there was nothing the matter with any of the cows. He informed me that the farmer had two supplies, one from his farm and another from Derbyshire, and that those attacked in Victoria-park had received their milk only from the farm, this special supply being retained for their use. Those who were supplied with the Derbyshire milk had escaped.

On Nov. 9th I called at the farm along with Mr. King, the veterinary surgeon of the Corporation. Mr. King made a careful examination of the cows, and found nothing in their condition which suggested that any of them could have

produced milk so toxic as that sent out from this farm. I asked the farmer a good many questions, interrogating him closely about the health of the cows and the health of the milkers, and of those who had to do with the milk otherwise. He informed us that a milkman had recently left him. We discovered nothing in reference to either man or cow. I also inspected the farm premises along with Mr. Martin, medical officer of health for Gorton, in whose district the farm is, and his Inspector. Close to the farmhouse is a tip of midden-privy refuse belonging to the Gorton Local Board, which Mr. Martin informed us might contain 40,000 tons of material of that kind. The farm is bordered on two sides by streams which meet below, one coming from this tip, and very foul, the other comparatively clear, but also contaminated with sewage and with matter from a tripe-boiling place. The water used to wash the pails was tepid. Mr Martin took the temperature of this water, which was 92° F. As was subsequently ascertained by Inspector Lord, the water used in cleansing the milk pails was kept in a foul cistern. The cows also drank from a pool in the yard which received drainage from the cowshed midden. The storage of the milk overnight was such as to expose it to warmth and contamination from the cowshed. It is needless to multiply particulars. The conditions were thoroughly insanitary and were such as to lend point to the bacteriological report of Professor Delépine on Nov. 12th, which is as follows:—

The Owens College, Manchester, Nov. 12th, 1894.

REPORT ON A SAMPLE OF MILK RECEIVED FROM DR. NIVEN ON NOVEMBER 8TH.

The milk was coagulated, the coagula being pure white and opaque. The smell was sour, and reaction strongly acid. Microscopical examination revealed fat globules in part confluent; there was no cell visible, and no extraneous matter, with the exception of micro-organisms distributed uniformly through and between the coagula. These bacteria were mostly short, plump bacilli, and large coils of variable size, here and there forming chains (streptococci). Abundant growth was obtained in milk and bouillon, both aerobically and anaerobically at the temperature of the body, the growth being accompanied by the production of gases having a very offensive smell. Abundant growths are also obtained on agar at 37° C., and on gelatine at 21° C. By plate cultivations various organisms were separated, two of which were more abundant than the others. These were a streptococcus with large segment, and a microbe having the characters of the bacillus coli communis. (These organisms are under investigation.) A virulent form of the bacillus coli communis has been found associated with severe gastro-enteritis. It is probable that, by accident, some contaminated water found its way into some of the vessels used for collecting or distributing the milk. Two tame young rats and two guinea-pigs were given large doses of the milk (varying in amount from one-tenth to half of the weight of the animal) without any unpleasant effect. The animals showed no dislike to it, and in one case a second dose was taken as readily as the first. It is therefore evident that the illness produced by the milk was not the result of a simple poisoning.

SHERIDAN DELÉPINE.

Nevertheless, there seemed something unexplained, and in any case it was desirable to ascertain more about the extent of the mischief done. I had already, on Nov. 7th, sent an inspector to the farm for a list of the customers supplied with milk from the cows on the farm. He brought me back a few names of people who had not been ill. On visiting the farm on Nov. 9th I insisted on having a complete list of the customers—those supplied in the morning being discriminated from those supplied in the evening. Such a list was subsequently sent, but I may say that I put no great value on any statements made with regard to the exact allocation of the milks respectively from the farm and from the supplemental supply in Derbyshire. In any case no distinction in the number of attacks is observed between those said to have been supplied respectively in the morning and in the evening. So far as it goes this would seem to exclude the fouling of one particular pail or of one particular supply as the cause of the disease. The list of customers was divided on Nov. 12th among the respective district inspectors, who made an inquiry into the occurrences in the different families on the list. It was possible from the same list to ascertain approximately the names of the medical men who attended the families attacked, and a letter was sent requesting them to be kind enough to give a brief account of their cases. The account thus obtained has not been completed, but showed conclusively, if further proof were necessary, the dependence of the illness on a particular milk-supply. It is intended to publish the accounts given by different medical men, of course without names and addresses. On Nov. 15th Inspector Lord found the milkman who had left the farm, who informed him that a cow had been removed about Nov. 2nd. He also visited the farm in Derbyshire from which the supplemental milk-supply came, and on Nov. 17th he proceeded to trace the cow which had been removed. On Nov. 19th the farmer came and stated that on Nov. 6th his attention was called to a cow with "gargil"—i.e., inflamed udder—the milk of which had been at that time, and was also on Nov. 7th, mixed with the milk of the other twelve cows on the farm. This cow was removed from the farm on Nov. 8th, and on Nov. 10th was slaughtered and sold for food.

"Gargil" or "garget," I am informed, is an acute inflammation of the udder, which often leads to extensive sloughing. In an article in the *Medical News* for Aug. 8th, 1891, Dr. Tower, of Milwaukee, gives a drawing of the microscopic appearances of a sample of milk from such an udder, showing streptococci and collections of micrococci. I am not aware of any similar outbreaks which have been ascribed to a case of gargil.

Altogether, 160 cases of illness have come to my knowledge in forty-seven families, but none of them were fatal. In forty-nine families amongst those given in the list of consumers no illness was experienced. It is probable, however, that many of these had not partaken of the milk. The total yield of the cows was given to me by the farmer on Nov. 9th as seven gallons at one milking—i.e., 112 pints in the day. Now a number of the households were very large and this would not have sufficed for them. Moreover, at the same visit I was assured that the families in Victoria-park were exclusively supplied with milk from the farm. These nearly all suffered from the use of the milk, and therefore I consider it likely that a number of the other families had other milk.

In endeavouring to form a judgment as to what was the element in the milk producing the mischief one had to consider the nature of the occurrence. The great majority of the illnesses began on the night of Nov. 5th and early on Nov. 6th. Evidently something new was imported into the situation. It is true that there was plenty of material round the farm to cause disease, and the abundant presence of bacterium coli commune in the sample examined by Professor Delépine was quite in accord with the conditions to which the milk had been subjected on the farm. But, then, it had been for years subjected to similar conditions, and nothing had taken place. Moreover, with so many members of the family suffering from diarrhœa it is possible that some contamination might have occurred in the house where the milk was obtained. The teats of the cows were far from clean at my visit, and the bacterium coli commune might have entered in that way, or it might have been introduced by contaminated water, and, as I have mentioned, the water with which the pails were washed could not be regarded as other than contaminated. But it is felt that there was something altogether new, and probably arising from something fresh imported into the situation, and that this something was probably disease in man or cow. Hence our persistence of inquiry. As it turned out, one out of thirteen cows was acutely ill, and the period of its acutest illness covered the period of the outburst. The farmer says that he became aware of the illness of the cow on Nov. 6th, and it may be assumed that it had begun to be ill a day or two before then. It does not go for much, but he himself felt it necessary to remove the cow. The weight of probability is, I think, otherwise, greatly in favour of this cow having been the origin of the outbreak. We have thought it advisable to investigate this subject further. Mr. King has undertaken to get some udders from cows suffering from "gargil," and Professor Delépine has undertaken to investigate the bacteriology and pathology of milk from them. A detailed account of a number of the cases has been sent me by the medical men in attendance. It shows the time of attack, and, when ascertained, how much milk was used. Taken along with Professor Delépine's report it appears to point to bacterial growth as against the action of toxines. I have not been able to find an account of any outbreak similar to the above, although it seems likely that such must have taken place. An interesting account is, however, given by Professor Gaffky[1] of an illness characterised by rigor, diarrhœa, and fever (up to 105·8° F.), with very severe general symptoms, and followed by prolonged convalescence, occurring on the same day in the assistant, chemist, and servant at the Institute at Giessen, in consequence of partaking of milk. The source of the infection was found in a cow suffering from hæmorrhagic enteritis. The same bacilli, short, very motile, and pathogenic for mice and guinea-pigs, were found in the dejecta of the cow and of the patients.

[1] Deutsche Medicinische Wochenschrift, vol. xviii., No. 14, 1892; see also Schmidt's Jahrbuch.

They were, however, absent from the milk. It is inferred that the milk of the cow must have become contaminated with dejecta. A matter of some consequence in the Manchester outbreak is the strong belief entertained at one household affected that the milk used had always been boiled. In other families this seemed to have prevented the illness. But there is no doubt whatever that the bacteria concerned in the outbreak were capable of resisting tolerably high temperatures, since, in some instances, the milk, the use of which had been followed by attacks, was warmed, and in other cases mixed with hot tea or coffee. Professor Flügge[1] discusses the effect of heat on the sterilisation of milk. He finds that the anaerobic bacteria which are to be found in almost every milk do in part resist boiling for a period of an hour and a half. "Of much more consequence, however, are the peptonising bacteria, which are frequently present in enormous quantities, grow best at a high temperature, possess a dangerous tenacity of life, not altering the milk perceptibly for a considerable time, though gradually imparting to it a bitter taste. Amongst the twelve species encountered were three which were found on several occasions in the ordinary milk of commerce, and which appear to have a special importance, inasmuch as their pure culture in milk evoked severe toxic effects in different experimental animals, and in young dogs especially produced violent diarrhœa, often leading to death. The spores of these peptonising bacteria stand heating in water or steam up to 100° C. for two, and in part even up to six, hours; the ordinary heating up to 100° for about three-quarters of an hour does not destroy them." Professor Flügge concludes that the ordinary process of sterilising milk by boiling is insufficient. In spite of that, a very large proportion of the infectious germs present in milk will be destroyed by boiling, sufficient to prevent many of them from reproducing disease. But it would certainly seem that we cannot afford to neglect other precautions in the conservation of milk, even if we do have it boiled before use.

In the course of this inquiry several questions of general moment have risen. If we are to assume that the infection in this case was due to disease in the cow, yet how far was this disease ascribable to the insanitary conditions to which the cows were subjected? In order to elucidate this question I inquired into the previous history of cows on the farm, and was informed that there had been no disease among the cows for seven years. Seven years ago nine cows were said to have died one after another of a disease characterised by rapid onset, weakness, and staggering. The exact nature of this disease, apparently, no attempt was made to clear up. Several of the cows at our visit had a temperature of 101° F. and one had a temperature of 102°. In regard to this one Mr. King was inclined to think that it was tuberculous. I can scarcely believe that animals placed under such conditions as existed on this farm would escape disease for seven years.

Then, again, how far are such conditions limited to individual farms and how far are they general? From my previous experience of dairy farms in a neighbouring district I should say that they are far below any standard of sanitation which should be tolerated; and from what I have heard of the keeping of cows in and around Manchester the whole trade must require investigation and amendment. But it would scarcely be possible to establish a high standard in one district and allow surrounding districts to retain their old conditions. To obtain the maximum of advantage from an improvement in the method of dairy farming this must be made general. For that purpose I would venture to suggest that a uniform code should be applied to all cowsheds, both in and outside our large towns, and that this should not be too stringent in regard to the size of existing cowsheds. Also that veterinary surgeons, at an adequate salary, should be appointed to districts to make periodical examinations of the farm premises and of the stock. They would be required at once to report any insanitary conditions on the farms, or any disease in the cows, to the sanitary authority in whose district the farm or cowshed lay, so that adequate measures of prevention might at once be taken. I cannot help thinking that many such occurrences as the above must take place, though on a more limited scale, and that a large amount of bad health, especially in infants, must be produced by an impure milk supply. It is the more necessary to exert ourselves in improving the state of the farms and the conditions of milk storage, if, as Flügge's results indicate, boiling affords an insufficient protection against impurities in milk. The directions in which amendment are most urgently called for are these:—

1. The removal from the milk-supply of all milk from diseased cows, or from cows in an abnormal condition, and the prompt removal from the cowshed of diseased cows.
2. The supply of pure drinking water to the cows.
3. Cleanliness about the farm. The teats and udders of the cows should be carefully cleaned before milking, and milked with washed hands. They are, as a rule, merely stripped, often with dirty hands.
4. Adequate space, lighting, and ventilation should be provided.
5. The milk pails and vessels should be scalded after each milk round and carefully cleansed.
6. The milk should be stored on the farm in a dry, well ventilated, and clean place.
7. When retailed in shops it should be protected from dust.
8. It should be sterilised before distribution if possible.

[1] In an article in the Zeitschrift für Hygiene und Infections-Krankheiten, vol. xvii., No. 2, p. 272, 1894, quoted in Schmidt's Jahrbuch.

ABDOMINAL SECTION DURING PREGNANCY.

BY JAMES MURPHY, M.D. DURH.,
SURGEON TO THE SUNDERLAND INFIRMARY.

DURING the year 1893 I had occasion to perform abdominal section on four patients who were pregnant. Their histories, briefly, were as follows.

CASE 1.—The patient, a lady aged twenty-two years, the mother of one child aged eighteen months, was sent by Dr. Norie. She was quite well up to two days before my seeing her, when she was suddenly taken with intense abdominal pain and tenderness, severe prostration, and constant vomiting. She had not menstruated for three months and believed herself to be pregnant. On vaginal examination the uterus was found to be enlarged and pushed forwards by a hard mass in Douglas's pouch. It looked very like a case of extra-uterine gestation after rupture, but there was no hæmorrhage from the uterus, and extra-uterine gestation is very rare with patients who have recently been pregnant. She was at once (Feb. 10th) removed to the Sunderland Infirmary and her abdomen opened immediately after her arrival, when she was found to be three months pregnant. The tumour in Douglas's pouch was a parovarian cyst, being quite black owing to a twisted pedicle. The tumour was removed and the abdomen washed out and closed. The case was perfectly aseptic throughout, and the patient was attended in her confinement on Sept. 4th by Mr. Stobo of Southwick, who informs me that she had an easy labour and gave birth to a boy. Both mother and child did well.

CASE 2.—A young lady thirty-two years of age was sent into the Sunderland Nursing Institute under my care by Dr. Beveridge of Hendon, to have an ovarian tumour removed, she being about six months pregnant. The operation was performed on April 20th, at 12 noon. The tumour proved to be a solid round-celled sarcoma weighing about two pounds, with somewhat numerous adhesions. The labour pains commenced twenty-four hours after the operation; they were slight for the first few hours, but towards 10 P.M. they became very much worse, and the patient soon gave birth to a boy, who lived for about twelve hours. The convalescence was uneventful, and the patient left the institute in three weeks, her highest temperature being 99·5° F.

CASE 3.—The patient, a woman twenty-two years of age, was sent to the Sunderland Infirmary by Dr. Houseman of Houghton-le-Spring. She was two months pregnant, and on the left side of her uterus there was apparently an adherent ovary in which she felt considerable pain. I did not consider there was any occasion to open the abdomen until Oct. 23rd, when to my surprise she became very collapsed, and fluid appeared in the abdomen. I at once put her under chloroform, and on cutting down to the peritoneum discovered that this fluid was blood. Opening the peritoneum by a small incision I removed about twenty ounces of blood and washed out the abdomen with boracic acid lotion. The uterus was enlarged, both tubes and ovaries were healthy, and from the

right ovary there was a bleeding point from a small adhesion, which had apparently held the ovary down to Douglas's pouch until the growing uterus had stretched it, and it then got torn some hours before the operation. I secured this adhesion with a ligature, and, there being no further bleeding point, the abdomen was closed. She made an uninterruptedly good recovery, and her pregnancy continued till the ninth month, when it was terminated by Dr. Houseman owing to accidental hæmorrhage. The child was born alive.

CASE 4.—On Aug. 29th Dr. Limont of Newcastle asked me to see with him a lady twenty-seven years of age, two months pregnant for the first time, who was suffering intense pain from a small ovarian tumour on her right side. I removed the tumour (about the size of a hen's egg), and the patient made an excellent recovery. At the end of a month she went for a fortnight to Bournemouth, where she unfortunately contracted a very severe attack of bronchitis, after which she suffered from albuminuria with considerable œdema of the legs, and on Feb. 15th she gave birth to a dead child. Since then the albumen has disappeared, and she is now quite well.

The above cases, being recent ones, are recorded to show that abdominal section can be safely done during pregnancy, a question which has been a good deal discussed in this country and in Germany during the past year. My own experience in a large number of cases of abdominal surgery and general surgery, such as amputations, removal of breasts, &c., is that it is very unusual for an operation to terminate pregnancy.

Sunderland.

NOTE ON THE TREATMENT OF DIPHTHERIA.

BY G. HUNTER MACKENZIE, M.D. EDIN.,
SURGEON FOR DISEASES OF THE THROAT AND NOSE TO THE EYE, EAR, AND THROAT INFIRMARY, EDINBURGH.

THE marked success which apparently follows the treatment of diphtheria by antitoxin raises the question whether the action of this remedy can be expedited or assisted by any auxiliary treatment, and, if so, what are the means which can so assist? In cases in which the disease has extended to the larynx, with consequent more or less obstruction to the respiration, it appears to be essential to recovery that some mechanical means should be adopted to maintain the integrity of the respiratory passage until the antitoxin has had time, possibly by repeated injections, to act. Roux[1] affirms that under the influence of antitoxin the false membrane ceases to grow within twenty-four hours from the first injection, and detaches itself in from thirty-six to forty-eight hours, at the latest by the third day. The thesis I now wish to maintain is that in intubation or tubage the medical man has a safe, easy, and effective means of combating the conditions attendant upon impeded respiration, which the new system of treatment occasionally requires. In fifteen cases of intubation in diphtheria reported in detail by me[2] the average length of time during which the tube lay in the larynx was twenty-six hours, and several of the patients who died succumbed to other causes than respiratory impediment. If the patient can be tided over twenty-four hours by means of an operation which does not require the administration of an anæsthetic and is not accompanied or followed by hæmorrhage or shock, and if antitoxin be simultaneously administered, the remedy is allowed time to commence to act under the most favourable conditions. If, on the other hand, marked obstruction of the larynx has developed before the commencement of administration of the antitoxin, and if no special means be adopted to combat it, the patient may die, and, judging from some reports of cases which have appeared in the medical press, has died before he could be thoroughly brought under the influence of the remedy. From a fairly extensive experience of both tracheotomy and intubation in diphtheria I feel warranted in agreeing with Roux in the following expression of opinion. He says in the article previously referred to: "How many children may be spared tracheotomy if the serum were administered sooner? We can even say that with the use of serum tracheotomy should, in the great majority of cases, be replaced by tubage. It is now no longer a question of leaving a tube in the larynx for days; it will suffice more frequently to retain it during twenty-four or forty-eight hours to prevent imminent asphyxia, and to gain time until the false membranes detach themselves. *Tubage is the complement of the serum treatment of the future*, tracheotomy will be the exception, and greatly to the benefit of the children." (The italics are mine.) But even if a longer period than from twenty-four to forty-eight hours be necessary to allow the therapeutic effect of the antitoxin to develop it can be afforded by intubation, as the following cases show.

CASE 1.—On April 19th, 1894, I was asked by Dr. Thyne of Edinburgh to meet him in consultation in the case of a boy aged six years, the subject of diphtheria. Membrane had been seen on the tonsils and adjoining parts of the pharynx, and had subsequently extended to the larynx. We found him *in extremis*, and as the boy's father positively refused to permit of tracheotomy being performed, it was suggested that intubation might be tried. This was accordingly done. The auxiliary treatment consisted in the administration of small hourly doses of mercury, and of a mixture of strophanthus and strychnine, with free alcoholic stimulation. The tube was permanently withdrawn on the fifteenth day. The patient recovered after a tedious convalescence.

CASE 2.—On June 15th, 1894, I was called by Dr. Hamilton Wylie of Pilrig to see a girl aged seven years, reported to be suffering from diphtheria, with great difficulty in breathing. Intubation was performed. The auxiliary treatment was on similar lines to that of Case 1. The tube was withdrawn on the tenth day. The patient recovered, with post diphtheritic manifestations during convalescence.

I may observe that I have never witnessed a patient in a worse plight than the child was in Case 1 before the performance of intubation. What struck the attendant physicians and myself in regard to the results of intubation in these cases were: (1) the great and instantaneous relief which followed insertion, and in Case 1 re-insertion, of the tube; (2) the easy manner in which it was borne by the little patients, and the absence of annoyance to them from its use; (3) no difficulty in swallowing whilst the tube was *in situ* in the larynx; and (4) the tube in each instance could easily have been retained for a longer period if such had been considered necessary. There seem to be good grounds for believing that intubation or tubage is a valuable auxiliary in the antitoxin treatment of diphtheria, and that the day is fast approaching when it will supersede tracheotomy—"greatly," as Roux observes, "to the benefit of the children."

Edinburgh.

[1] THE LANCET, Sept. 22nd, 1894.
[2] Edin. Med. Jour., Jan.–May, 1892.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A FATAL CASE OF ANOREXIA NERVOSA.

BY C. F. MARSHALL, M.D. VICT., F.R.C.S. ENG.,
LATE SURGICAL REGISTRAR AND ANÆSTHETIST TO THE HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET, W.C.

IN connexion with fatal cases of anorexia nervosa, an interesting example of which appeared in THE LANCET of Jan. 5th, 1895, it may be of interest to record another case of this affection which was under my care in 1890. The history is briefly as follows:—

A girl, said to be eleven years of age, but who looked nearly fourteen years old, was admitted to the North Eastern Children's Hospital on May 10th, 1890. The history was only of one week's loss of flesh, anorexia, and vomiting. Four years previously she was said to have had similar attacks. On examination she was found to be extremely emaciated, but there were no signs of organic disease. She had a wild, hysterical appearance, was very restless, and refused all food; her bodily strength, however, was greater than would be supposed from her extreme emaciation. (The abdomen was so sunken that the vertebral column and sacrum could be easily felt.) As she refused all food she was fed on enemata of peptonised milk beef tea, and brandy. In

two or three days peptonised milk and beaf tea were taken by the mouth in small and frequent doses. In ten days she could take a moderate diet by the mouth, but suffered from diarrhœa. On the thirteenth day after admission she rapidly became worse, the temperature rose to 102° F., and on the fifteenth day she died. At the necropsy some old casecus foci were found at the base of the left lung; the stomach was congested with scattered ecchymoses; the other organs were normal. The case was diagnosed as probably one of anorexia nervosa, but in spite of the great emaciation no fatal issue was apprehended till two days before death. This diagnosis was, in the absence of any lesion to account for death and in the absence of diabetes, supported by the post-mortem examination. The presence of the old tuberculous foci in the lungs is of interest, in that this disease was supposed to originate from latent tuberculosis; but in the above case the tubercle was too small in extent and too localised to have been a factor in the cause of death, which was presumably due to the inanition having proceeded too far for recovery before systematic and regular treatment was begun. Dr. Laségue, writing on this disease in 1873,[1] states that death in such cases is never due primarily to the anorexia, but to some secondary disease such as tubercle occurring while the patient is in a lowered condition. Sir William Gull,[2] on the other hand, records a fatal case with no organic changes except thrombosis of the femoral veins.

London, W.C.

OBLITERATIVE ARTERITIS IN A BOY FOURTEEN YEARS OF AGE.

BY BERTRAM W. BOND, M.B., B.S. DURH., M.R.C.S., L.R.C.P. LOND., L.S.A.

WHILE acting as locum tenens to Dr. Easby of Peterborough a boy fourteen years of age came to me suffering from a sharp attack of "shingles" extending round the left side of the chest and back. He was evidently in bad health, and on taking his left wrist to feel his pulse I discovered that none could be felt. No pulse could be felt anywhere in the left upper extremity until the subclavian was reached. Here the beat was synchronous with that of the right subclavian, but much feebler. The radial and brachial arteries could be felt as cord-like bodies. On questioning the boy he said that beyond occasionally having "pins and needles" in the left arm and fingers he had felt no inconvenience whatever, and in fact he was unaware of the condition. He usually suffered from chilblains during the winter months, especially on the feet. The collateral circulation was evidently good, for beyond a slight blueness of the fingers there was no other visible sign of deficient nutrition. The temperature of the fingers was practically the same on both sides, and there was no anæsthesia. As regards cause, there was no sign of cervical rib or other pressure on vessels, the heart sounds were normal, and no specific or rheumatic history could be obtained. There were no signs of congenital syphilis elsewhere. The pulse in the right radial was normal, and no undue thickening of arterial walls could be felt. The interest of the case lies in the early age of the patient. I have seen a similar condition at the age of twenty-three and twenty-four years, but believe it to be rarely seen in a patient as young as fourteen years.

Englefield Green.

CASE OF POISONING BY NUTMEGS.

BY T. G. SIMPSON, L.R.C.P. EDIN.

HAVING been in practice a great number of years without seeing, or even hearing, of a similar case, I think the following particulars of a case I had recently under my care may possibly interest some of the readers of THE LANCET.

On Sunday morning, Dec. 9th, 1894, during my absence, my assistant, Mr. E. Gibbs Smith, was called to see a woman twenty-six years of age. His report was as follows:—"I found the patient lying upon the bed in a drowsy condition and very delirious, the delirium taking the form of confusion and mistaking one person for another. There were fairly lucid intervals. She complained of a sensation of great tightness across the chest, of vertigo and faintness upon attempting to stand. She had vomited several times, but unfortunately I was unable to see the vomited matter. The pulse was 75 per minute and rather feeble, as was also the heart's action. The pupils were normal. Inquiries of a person in the house elucidated the fact that the patient, a strong, healthy woman, had, being a week over her menstrual period, taken two nutmegs, bruised, in a small quantity of gin. I ordered her to be kept in bed and to be given a little strong coffee with a dessert-spoonful of brandy in it every half-hour. I also prescribed the following mixture every four hours: bromide of potassium, carbonate of ammonia, bicarbonate of soda, spirit of cajuput, and chloroform water." I saw the patient myself in the afternoon, and found her condition considerably improved, but still showing the symptoms described. I continued the same treatment, and the next day she was very much better, but still had some vertigo and was very weak. I discontinued the coffee and brandy, but kept on with the medicine, and by the following day she was able to get up, though still weak. The case has gone on favourably since. I may add that the nutmegs had no effect whatever in producing miscarriage.

Hackney-road, N.E.

[1] Archives Générales de Médecine.
[2] Journal of the Clinical Society, vol. vii., 1873.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

HOSPITAL FOR SICK CHILDREN, GREAT ORMOND-STREET.

SLOUGHING OF URETHRA FROM PRESSURE BY A METALLIC RING; PLASTIC OPERATION; RECOVERY; REMARKS.

(Under the care of Mr. EDMUND OWEN.)

THIS case is an example of an injury by no means rare in children, usually in consequence of some act of their own in tying or twisting a ligature of some kind round the penis. A case, however, has been recently recorded in which the constriction was produced in an infant by a human hair, there being no evidence as to the manner in which it had been applied. The injury resulting does not often extend so far as it did in this patient, for, as Mr. Owen remarks, there is a probability that a traumatic stricture will yet develop, although the urinary fistula is closed by operation. Urinary fistulæ in the penile portion of the urethra are difficult to close, and none of the recognised methods of operation introduced by Ricord, Nélaton, or Le Gros Clark were available here. Mr. Owen therefore performed a novel operation, as described below, with a successful result. For the notes of the case we are indebted to Mr. C. F. Marshall, surgical registrar.

On March 30th, 1894, a boy nearly twelve years of age was admitted to the Hospital for Sick Children for incontinence of urine. The boy's mother said that she first noticed a swelling of the penis about a month previously and applied fomentations to it. Latterly the boy had lost control over his urine. She knew nothing more. The prepuce and glans penis were greatly swollen. Behind the swelling there was a constriction caused by a metallic ring five-eighths of an inch in diameter. The ring, which originally surrounded the penis, had now ulcerated through for a considerable distance so as almost to amputate the organ, and there was a large urethral fistula at the seat of constriction, the result of an extensive sloughing. Chloroform was at once administered and the ring was cut through with bone forceps and removed. At the same time a large portion of the œdematous prepuce was taken away, and a catheter was passed down to the fistula, but it could not be got into the bladder. On May 2nd the œdema of the penis had gone down considerably, but there was still a great deal of swelling in front of the constriction. All urine was passed by the fistula. Ether having been administered, Mr. Owen cut down on the strictured part of the urethra and passed a grooved staff into the bladder; he then cut down upon the staff in the perineum and introduced a permanent drainage-tube into the bladder through the middle line. On June 13th, under ether, Mr. Owen dissected away all scar

tissue and a certain amount of skin from around the fistula, and having raised an oblong flap of skin on the pubes (leaving it attached at both ends) drew up the penis beneath it and stitched the edges of the flap to the margins of the skin around the fistula. He then made vertical cuts near the ends of the flap so as to take off the tension of the flap, which, to a slight extent, occurred when the penis had been slipped beneath the bridge. On the 20th the flap appeared to have united by primary union. On the 27th the boy was examined under chloroform. There was a minute opening at both the upper and lower edge of the flap, through which urine oozed; these spots were touched with solid nitrate of silver. The perineal tube was still kept in. On July 4th, under the influence of chloroform, the ends of the flap were cut free, and the perineal tube was removed. A week later there remained one minute fistulous spot at the upper margin of the flap; it was freshened up and sutured by Mr. Owen. On the 27th similar treatment was adopted. On Sept. 1st the fistula was entirely healed; most of the urine passed by the natural way, but there was a considerable stricture, a No. 6 English bougie being passed with difficulty. On the 25th the patient was discharged. The perineal opening had now quite healed. A No. 7 catheter was passed. He has been going on quite happily, but on Nov. 18th he was readmitted for examination of the urethral canal. The passage admitted a No. 6 catheter, which was passed every alternate day and kept in for about a couple of hours.

Remarks by Mr. OWEN.—From time to time aid is sought on behalf of a boy who has slipped his penis through a metal ring or who has tightly surrounded its root with a string or a horsehair, which is playing the part of the coat of Nessus. The venous and the lymphatic return being thus delayed, the penis and prepuce swell to a great size, and the removal of the metal band by the way in which it was put on is impossible. In some cases, as in that above reported, the ring can be cut with pliers and so removed. On one occasion a boy was brought to me whose swollen penis was encircled by a thick brass ferrule. This could not have been cut or filed off without risk of injury to the parts. Its removal was, however, easily effected by winding a thread around and pricking the swollen tissue to empty it of the œdema. The application of the thread was done as evenly as if one were "whipping" a splice in a fishing rod. When a piece of string or a horsehair has been tied round the penis it quickly embeds itself in the ulceration which its pressure causes, and so it disappears from view, and at the same time the œdematous skin on the distal side bulges over and hides the wound. In every case, therefore, of œdema of the penis in a boy, most careful search should be made, not only for a circumferential linear ulcer, but also for some inconspicuous mechanical obstruction to the return circulation. In the subject of these clinical remarks the brass ring was entirely removed from view; the mother knew nothing of it. The ring must have slowly been embedding itself, but as to when it gave rise to obstruction of micturition, or when to ulceration or sloughing of the urethra, there was nothing to show. Suffice it to say that when I first saw the boy the spongy part of the urethra had lost its floor to a very serious extent. Evidently it was of no use doing anything with him then, that part of the penis being girt with a deep ulcer and the tissues beyond it being swollen with an almost solid œdema. We contented ourselves, therefore, with keeping the penis bandaged and raised, all the urine escaping by the wound. When the swelling had a good deal subsided we established the perineal drain; and soon afterwards we denuded the under aspect of the penis and carried out the plastic operation. The urethra is now perfectly water-tight, but I am afraid that the unfortunate boy will have trouble at the seat of inevitable traumatic narrowing; such trouble, however, will not be due to the bridge of new skin, for it remains soft and full, but to the inevitable contraction of the new material which was developed from the granulation tissue at the seat of injury.

BURTON-ON-TRENT INFIRMARY.

A CASE OF ABDOMINAL SECTION FOR SARCOMA OF OVARY, AND ONE FOR RUPTURE OF EXTRA-UTERINE FŒTATION; REMARKS.

(Under the care of Mr. PHILIP MASON.)

SARCOMA of the ovary is a comparatively rare disease, is apt to show itself in early life rather than at a later age, and usually runs its course quickly, whether an operation be performed or not. In these circumstances it has been questioned whether it is worth while to perform abdominal section and remove the diseased part. Freund[1] advises on this subject that, as we are unable to diagnose with certainty the presence of malignant disease before operation even in cases of extensive metastasis, an incision, with cleansing of the peritoneum, is justified, and might produce a better general state of health; he considers that secondary tumours in the ante- or intra-uterine space should not contra-indicate operation. Schröder[2] found sarcomata in 10 out of 600 ovarian growths; and Olshausen noticed them 21 times in 293 cases. Amongst the cases of solid ovarian tumour collected by Leopold[3] there were 12 of sarcoma, in 7 of which the tumour was on both sides; all those reported by Olshausen were similarly placed. It has been suggested by Anger[4] that extra-uterine pregnancy should be regarded and treated as a malignant growth. There is no doubt that the life of the patient is in constant danger, the greatest danger being that of hæmorrhage, and the woman is fortunate who is so placed as to permit of abdominal section, as in the following case, otherwise a fatal ending must be expected. Schauta[5] analyses 626 cases of ectopic gestation, the collective mortality of which exceeded 41 per cent. In a spontaneous course it reached a mortality of 68·8 per cent. The most common form is that of tubal pregnancy. For the notes of these cases we are indebted to the house surgeon, Mr. Charles Thompson.

CASE 1. *Sarcoma of ovary.*—A single woman aged twenty-one years was admitted into the Burton-on-Trent Infirmary on Oct. 2nd, 1893, complaining of pain and tenderness in the abdomen, with some swelling, obstinate sickness and diarrhœa, and a profuse irregular menstrual discharge of some weeks' standing. On examination the abdomen was found to be somewhat prominent, especially to the right of the median line, about an inch and a half below the umbilicus, where a distinct tumour could be felt, pyriform in shape, and about the size of a fœtal head at full term. The tumour, which appeared to be fixed centrally, inclined somewhat to the right side and had two or three bosses on its surface, each about the size of a horse chestnut, the one on the right being more prominent, tender, and more inclined to point. A catheter could not be passed. On vaginal examination a hard mass was felt in Douglas's pouch, the uterus was not movable, and was displaced forwards; a sound passed two inches and a half. After being under observation with little change for about a month the patient became rapidly worse, the temperature rising in the evening to 104° F. and rarely falling below 101° during the day; there was considerable peritonitis, the tumour commenced to soften, and fluctuation was distinct over the spot which had been the most prominent and most tender. On Nov. 7th she was placed under an anæsthetic and a median incision made about four inches long. On opening the peritoneal cavity a large tumour was seen which appeared to spring from the right broad ligament, to which it was united by a pedicle and did not involve the uterus. In consistence it was partly hard and partly composed of cysts, one of which contained pus and appeared to be on the point of breaking, and ruptured during manipulation. The whole mass was removed with the right ovary and broad ligament, the cavity washed out, a drainage tube inserted, and the wound stitched up. On the evening following the operation the temperature was 105·2°, the patient was very restless, and she complained of abdominal pain on deep inspiration. The temperature on the following morning fell to 99°. The greater part of the wound healed by first intention, but a small deep sinus remained when the tube was removed, and did not heal for about a month. During this time the patient gained weight rapidly and appeared to be doing well until Dec. 1st, when sickness and diarrhœa returned, with mucus in the stools. The temperature rose to 103°, and she sank into a typhoid condition. In four or five days she rallied, and on the 5th the temperature again fell to subnormal and remained so until the 13th, when she was allowed to sit up. After a day or two there was some return of pain, but no tumour could be felt. Thrombosis of deep veins appeared in the left leg on the 15th, and she complained of a deal of pain in the left knee, which subsided in about a fortnight. There was no further rise of temperature after the

[1] Annals of Surgery, St. Louis, vol. i., 1890.
[2] Sajous' Annual of the Universal Medical Sciences, vol. ii., G 6, 1890.
[3] Ibid. [4] Ibid., 1892, vol. ii., G 54.
[5] Ibid., and Centralblatt für die Medicinischen Wissenschaften, Berlin, 1890.

23rd, and the patient was discharged on Jan. 4th, 1894, apparently well. About a week after her discharge she was attended outside the infirmary, and complained of pain and tenderness in the left iliac region; a small growth was there felt, which grew with such rapidity that it almost filled the abdominal cavity within a month. Distinct lobulated masses could be felt, and the peritoneal pain was intense. She died from exhaustion on Feb. 10th.

CASE 2. *Extra-uterine fœtation.*—A woman aged twenty-eight years was admitted into the Burton-on-Trent Infirmary on June 13th, 1894, in a state of collapse. There was a history of three months' irregular menstruation with pain and swelling in the left ovarian region; the patient had become suddenly collapsed a few hours before admission. On opening the abdomen the left Fallopian tube was found to be distended by a tumour which had ruptured into the peritoneal cavity and was bleeding freely; there was a large amount of blood in the abdomen. The left ovary and tube were removed, the peritoneal cavity washed out, and the incision in the abdominal wall closed. The patient made a good recovery.

Remarks by Mr. MASON.—The tumour removed in Case 1 was sarcomatous in structure, and contained not only several fair-sized cysts, but also an unmistakable abscess with rugged walls. This was evidently on the point of bursting when the operation was performed. This is the second occasion on which I have found a similar condition to exist, my other patient being an elderly woman with a large tumour which, on removal, was found to be solid except for two large abscesses at some distance apart. In this case the tumour was universally adherent and had no pedicle, the abdominal-wall wound healed by first intention, but the patient became suddenly ill at the end of a fortnight and died from the effects of fæcal extravasation, probably due to the injury of the bowel during the separation of the adhesions.

ROYAL VICTORIA HOSPITAL, NETLEY.

BONY ANKYLOSIS OF HIP-JOINT; MALPOSITION; OSTEOTOMY; RECOVERY WITH USEFUL LIMB; REMARKS.

(Under the care of Surgeon-Major H. R. WHITEHEAD, Assistant Professor, Military Surgery.)

THE operation described as the subcutaneous section of the femur below the trochanters was first performed by Mr. Gant in December, 1872, and we published an account of the operation in THE LANCET of the 21st of that month. There is little doubt that it is the operation which is best adapted for the correction of bony ankylosis of the femur in a bad position after disease of the hip-joint of a tuberculous nature. The principles of the operation described below were the same as guide the surgeon in Gant's operation; but there are one or two details which differ. For instance, Gant[1] writes that the knife was "passed down to and over the femur, so as to make a transverse line across the bone; then the knife is withdrawn and, still keeping the thumb in position not to lose the track of the narrow subcutaneous incision, a thin, narrow-bladed saw is entered at the same point and passed along the track of the wound across the femur, which is then readily sawn through." Macewen's osteotome is such a useful implement that many surgeons now prefer it to the saw.

A trumpeter in the Royal Artillery, eighteen years of age, was invalided home from Egypt, and was admitted to the Royal Victoria Hospital, Netley, in November, 1893, suffering from hip-joint disease of nine months' duration. He enlisted at the age of fourteen years, and had enjoyed good health till March, 1893, when he began to feel acute pain in the right hip-joint, which was much increased by any movement or by pressure on the sole of the foot, and he was unable to walk. There was no history of a fall or any injury to account for the origin of the disease. He was admitted into hospital at Cairo. An abscess formed and pointed anteriorly; this was opened, and discharged for some months, ultimately healing in February, 1894. For some months he suffered from a hectic temperature. Extension was applied to the leg in June, 1893, which diminished the "starting pain" in the joint. On his admission to the Royal Victoria Hospital, Netley, in November, 1893, the patient was in a very feeble and emaciated condition. He had bedsores on his back, and a sinus existed in the right groin, discharging a glairy fluid; the track, however, did not lead down to dead bone. The right thigh was flexed on the abdomen, the knee was semiflexed, the foot was everted, and the leg and thigh rotated outwards. Lordosis was present even when no attempt was made to straighten the limb, and this condition was greatly exaggerated on any attempt being made to do so. As soon as the bedsores had healed sufficiently extension was applied, but failed to bring the limb into a better position. There was hardly any pain about the hip, and the discharge lessened daily, till in February the sinus had completely healed. No movement could be obtained in the hip-joint. In April, as all pain had ceased and the sinus had completely healed, the efforts to improve the position of the leg by extension having also failed, it was decided to place the patient under the influence of an anæsthetic, to decide definitely the nature of the ankylosis, and if possible to straighten the limb. After complete anæsthesia had been produced it was found that absolutely no movement could be procured in the hip-joint. The knee, which was semiflexed, was, however, straightened. The next day the hip-joint was entirely free from pain, and no doubt now existed that the ankylosis was of a true bony nature. It was, therefore, decided to divide the femur in its upper part, with the view of giving the patient a straight and useful limb. On May 1st, after the limb had been carefully prepared by washing and the skin rendered aseptic, the patient was placed under the influence of chloroform. He was then placed on his left side and the right thigh laid on and supported by a large sand pillow. An incision was made in the line of the shaft of the femur, commencing three inches below the tip of the great trochanter, about an inch and a half long, and carried down to the bone. The periosteum was divided and the soft parts were held aside by retractors. A Macewen's osteotome was introduced and the shaft of the femur was divided just below the small trochanter, as suggested by Gant. On attempting to straighten the limb some bands of fascia on the anterior aspect of the limb, attached to the anterior superior iliac spine, were found to be tense, and were divided subcutaneously by a tenotome; the limb could then be brought into a straight and good position. The operation wound was closed by two silver sutures and a continuous horsehair suture, and the part was dressed with an aseptic gauze dressing. An interrupted long splint was applied to the side, and extension by a 7-lb. weight was also employed. The patient made a complete recovery after the operation. His temperature did not rise above 99·2° F.; it reached this on the evening of the day of operation and afterwards remained uninterruptedly normal. The wound was dressed on the sixth and twentieth days, and healed at once. Seven weeks after the operation the long splint and extension were removed; the leg and thigh were in excellent position, and complete consolidation of the shaft of the femur had taken place. On measurement the right leg was found to be a shade under half an inch shorter than the left. Excellent movement existed in the right knee-joint. A Thomas's hip-splint was applied for a few days and the patient allowed to get about. He gained strength rapidly, and at the end of nine weeks was able to walk with comfort with the aid of a stick and a slightly raised sole. The pelvis allowed of much motion. He was discharged from hospital on July 9th, ten weeks after the operation, and although unfit for military service he had a very useful leg and was quite capable of earning his living in civil life.

Remarks by Surgeon-Major WHITEHEAD.—In this case the choice of operation seemed the only difficulty. Adams' operation for division of the neck of the bone did not seem applicable in this case, as suppuration had evidently taken place in the joint, and probably absorption of the neck of the bone had taken place to some extent. Barton's method of dividing the bone by a chain saw was thought of, but in experiments on the bones of animals the saw invariably jammed and became useless. Macewen's osteotome seems in every respect a very suitable and satisfactory instrument. Some little trouble was caused in getting the metal to the right temper to avoid chipping of the edge, and as a matter of fact a piece of the edge did chip off at the operation; it was left in the bone, but it produced no discomfort.

[1] Science and Practice of Surgery, vol. ii., p. 59. 1886.

ROYAL INSTITUTION.—The Friday evening meetings of the members commenced on Jan 18th, when a lecture was delivered by Professor Dewar on Phosphorescence and Photographic Action at the Temperature of Boiling Liquid Air.

Medical Societies.

MEDICAL SOCIETY OF LONDON.

Cycling and Heart Disease.

AN ordinary meeting of this society was held on Jan. 14th, the President, Sir WILLIAM DALBY, being in the chair.

Sir BENJAMIN WARD RICHARDSON read a paper on Cycling and Heart Disease. He commenced by saying that a few months ago Dr. Petit of Paris had read a paper before the French Academy of Medicine bearing on disease and cycling,[1] in which several sudden deaths from heart disease during cycling were referred to, and the possible dangers attending cycling exercise were commented upon. Sir B. W. Richardson, who had been a practical cyclist since 1877 (over sixteen years), and who had ridden with numberless riders of different ages and sexes and under the most varied conditions, ventured, therefore, to detail from his experience certain of the effects he had observed. He divided his paper into the following heads: (1) the immediate effect of the exercise on the rider; (2) the after-effects, as observed in the consulting-room, and the conditions in regard to the heart and circulation under which riding was favourable or unfavourable; and (3) a summary of the more salient medical considerations. With regard to cycling and its effects upon the body at large, Sir B. W. Richardson said that the exercise told primarily and most distinctively on the heart, in which it differed from other exercises. In all riders at all ages it produced at once a quickened circulation, though riders themselves might not be conscious of the phenomenon. The effort might be so extreme as to cause the pulse to rise from 65 or 75 to 200 beats per minute, and although after a longer time it sobered down it was always a quickened action which continued so long as the rider was at work. This act of quickened movement accounted, the speaker observed, for the astounding journeys a fully trained cyclist could undertake, journeys lasting two or three days and nights when the cyclist was in his prime. The same probably accounted for his endurance as against sleep, the circulation through the brain being one continued series of waves by which the molecular change of the brain occurring during natural sleep was suspended. The sounds of the heart and the readings of the pulse were then described, and the conditions under which the heart increased in action, and sometimes underwent enlargement. He had, however, never once seen a rider embarrassed by cardiac overstrain, faintness, breathlessness, angina, or vertigo so as to be obliged to dismount. Indeed, he had known a practical rider who could climb a hill on his machine, but could not mount a flight of stairs on his feet without breathlessness and slight palpitation; also he had never seen a sudden death from cycling. Under the second head Sir B. W. Richardson remarked that he had met with instances in which after some years of cycling there was evidence of cardiac disease, with general languor and inability to sustain fatigue if exercise were again tried on the machine. On the other hand, he had known examples in which even an octogenarian had kept up the exercise in a moderate degree, apparently with benefit to the circulation, and who in one journey had ridden from London to Bedford. In certain instances he had seen what appeared to be benefit arising from cycling, even when there was an indication of some disease affecting the circulation. He had known good arise from it in cases of varicose veins, in examples of fatty degenerations, and unquestionably in conditions of anæmia. After discussing opposite conditions, in which excessive cycling had become a definite cause of injury to the circulation, he passed to his third head in the following summary. "First, cycling, when carried on with moderation, may, in so far as the healthy heart is concerned, be permitted or even recommended by practitioners of the healing art. Secondly, in all cases of heart disease it is not necessary to exclude cycling. It may even be useful in certain instances where the action of the heart is feeble and where signs of fatty degeneration are found, since increased muscular exercise often improves the condition of muscle, and of no muscle more than the heart itself. Thirdly, as the action of cycling tells directly upon the motion of the heart the effect it produces on that organ is phenomenally and unexpectedly great in regard to the work it gets out of it. Fourthly, the ultimate action of severe cycling is to increase the size of the heart, to render it irritable and hyper-sensitive to motion, the cycling acting upon it like a stimulant. Fifthly, the over-development of the heart under the continued over-action and extreme over-action affects in turn the arterial resilience, modifies the natural blood pressure, and favours degenerative structural change in the organs of the body generally. Sixthly, a fact that has only been incidentally noticed in this paper is worthy of notice—namely, that in persons of timid and nervous natures ('neurotics') the fear incidental to cycling, especially in crowded thoroughfares, is often creative of disturbance and palpitation of the heart, and ought to be taken account of as a piece of preventive advice. Seventhly, in advising patients on the subject of cycling it is often more important to consider the peripheral condition of the circulation than the central. Enfeebled or worn-out arteries may be more dangerous than the feeble heart, and, when connected with a heart that is over-active, are seats of danger. This same remark would, of course, apply to cases where there is local arterial injury, as in aneurysm. Eighthly, venous enlargement seems rather to be benefited than injured by cycling, and conditions marked by sluggish circulation through veins are often greatly relieved by the exercise. Ninthly, there are three things which are most injurious in cycling—(*a*) straining to climb hills and to meet head winds; (*b*) excessive fatigue; and (*c*) the process of exciting the heart and wearing it out sooner by alcoholic stimulants, and the omission of light, frequently repeated, and judiciously selected foods. Lastly, the time has arrived when practitioners of medicine everywhere should make observations for themselves that confirm or confute these observations and add to them so much more that I of necessity have omitted."

The PRESIDENT, in thanking Sir B. W. Richardson for his paper, referred to the influence which remarks from him exerted on the public mind, and rejoiced that from him should come words of reassurance and caution in the use of the cycle. It was apparent that cycling exerted nothing like the strain upon the heart which was entailed by other forms of athletic exercise, such as rowing or sparring.

Dr. SANSOM congratulated Sir B. W. Richardson on having made a substantial addition to our knowledge on a subject of growing importance. A practitioner, he thought, should be something of a cyclist to be able to appreciate and advise upon the disturbances incidental to riding. He deprecated the absurd resolutions of the French Academy of Medicine with regard to the dangers of cycling, and regarded the recommendation to adopt searching anthropomorphic measurements in those intending to ride as bordering upon the ridiculous. Referring to his oration on Rapid Heart, delivered before the society, he could only recall one instance in a cyclist, and he had met with no instance of irregular heart among riders. He thought the worst form of exertion was the running to catch a train, which produced both irregularity and rapidity of heart beat. The influence of cycling was decidedly more in the direction of good than in that of evil. As a therapeutic agent in the treatment of actually existing heart disease it was quite in accord with the recommendations of Professor Hirtl of Munich, who prescribed physical exercise, but he thought cycling had many advantages over climbing, which Professor Hirtl extolled. He looked upon the cycle as an important hygienic and therapeutic agent, and thought it was responsible indirectly for the immense moral improvement noticeable in the track and the era of the cycle.

Dr. MACGEAGH said it was a very important point in cycling to avoid pushing against one's inclination up steep gradients. He felt the exertion much less than that of other forms of athletic exercise, and found that under it he maintained a perfectly even body weight. The chief strain, he thought, fell upon the nervous system, and was liable at first to induce sleeplessness; this, however, soon wore off.

Dr. ROUTH inquired as to Sir B. W. Richardson's experience of ladies cycling.

Dr. WASHINGTON ISAAC referred to Mr. Bridgman of Berkley developing heart disease while he was a cyclist and to his making the discovery himself with a binaural stethoscope.

Dr. FLETCHER LITTLE said that the tremulousness so often complained of formerly had diminished greatly since the improvement in saddles and tyres. He thought there was

[1] THE LANCET, Sept. 15th, 1894.

no better treatment for mitral disease and dilated heart than the cycle, which was quite in accord with the system adopted by Schott of Neuenheim. The danger and anxiety of riding through crowded thoroughfares should be avoided, especially by nervous persons and those suffering from heart disease, who should also eschew hills. The exercise and facility for inhaling fresh air were of immense importance to both men and women, especially those following sedentary occupations.

Dr. BLACK mentioned a patient with gout who had been recommended the cycle, and asked if it could be looked upon as a remedy for gouty heart.

Mr. SOLOMON SMITH thought the tendency of geared wheels was to bring back the exertion of cycling to that of climbing. He considered the best feature in this form of exercise was the predominance of motion over exertion, especially in the treatment of cardiac disease, and should recommend the avoidance of geared wheels.

Sir B. W. RICHARDSON, in reply, said Mr. Bridgman was not oppressed with any fear of riding after he found he had cardiac disease, but continued his exercise. He was not prepared yet to say how actual disease of the circulation might best be cured by the use of the cycle. He recognised the occurrence of sleeplessness and sometimes twitching as of the effect of vibration after riding, but he could not agree that the principal effect was on the nervous system. The rise of the pulse from 75 to 200 beats indicated that the circulation was first affected. He did not pretend to prescribe the full and exact measure of utility of the cycle in therapeutics, he came rather as one who had collected a few flowers by the way and offered them for consideration and arrangement by his audience.

PATHOLOGICAL SOCIETY OF LONDON.

Enlarged Spleen.—Five Brains from Insane Patients.—Serous Pachymeningitis in a Syphilitic Child.—Cancer of Mamma.

AN ordinary meeting of this society was held on Jan. 15th, Dr. PAVY, the President, being in the chair.

Dr. COLLIER exhibited the Spleen of a female child aged six. Enlargement was first noticed at the age of two, and gradually and steadily increased up to the time of death. The mesenteric glands were also enlarged. No change in the blood was observed. On removal the spleen weighed 4 lb. 2 oz., the total body weight being 23 lb., so that it represented more than one-sixth of the total body weight. A sister aged four had died four years previously with enlarged spleen. On microscopic examination the splenic reticulum was seen to be replaced by very large endothelioid cells, in places packed closely together, and filling the whole splenic sinuses. In these places the blood-supply was almost *nil*, and the large cells showed a tendency to degenerate. In these places, also, there was a slight increase in the thickness of the trabeculæ. The Malpighian corpuscles could not be distinguished. Small arterioles were seen closely surrounded by the large cells. In some of the retro-peritoneal glands examined the adenoid tissue was seen to be largely replaced, especially at the periphery, by large cells similar to those in the spleen. Some small grey points like tubercles occurred on the small omentum, and were found to be young lymphoid glands.—Mr. WALTER SPENCER suggested the possibility of tubercle or syphilis having some influence in the production of the enlargement, and proposed that the specimen be submitted to the Morbid Growths Committee.—Dr. ROLLESTON, who seconded this proposition, added that either lymphadenoma or leukæmia might account for it.—Dr. WALTER CARR said the case much resembled those occurring in infancy associated with simple anæmia and rickets. Hæmorrhage only occurred in extreme conditions of the sort. He thought either syphilis or rickets was probably the cause.—Dr. HERRINGHAM thought it was difficult to make a genuine disease of splenic anæmia. The term did not explain much.—Dr. COLLIER, in reply, said the signs of rickets were very slight, and no mention was made of them in the post-mortem report, there was no evidence of syphilis, and the anæmia was not intense.

Mr. C. F. BEADLES exhibited Five Brains from patients who had died insane. The first showed the right lobe of the cerebellum ploughed up by an extensive hæmorrhage which had made an opening into the subdural space. The vessels were atheromatous and the brain softer than natural. The patient was a man sixty-five years of age who had been insane four years, suffering from delusions and great depression. The second exhibited a large collection of fluid occupying the site of the right lobe of the cerebellum, which was much shrunken. The basal arteries were diseased and the right internal carotid occluded by a calcareous mass at its entrance to the cranium. There was also atrophy of some of the cerebral convolutions, with dilatation of the ventricles. The patient was a woman aged fifty-six who had suffered four months from wild excitement and delusions of persecution, with epileptiform convulsions and left hemiplegia. The third, from a female aged eighty-two, showed enormous dilatation of the ventricles, with disappearance of the central grey ganglia. It was removed from a patient who had been imbecile and dumb from birth, and more actively insane for thirty-four years. The fourth showed great deficiency of brain substance in the left cerebral hemisphere, the central part being occupied by a large collection of fluid. There were also dilatation of the ventricles and signs of old hæmorrhage; it was from a female aged seventy-seven, with insanity of thirty-one years' duration, maniacal and violent. The fifth exhibited great atrophy of the left cerebral hemisphere and of the right side of the cerebellum, and was from an insane patient aged sixty-six who had been demented and epileptic fourteen years.

Dr. WALTER CARR showed a specimen of Serous Pachymeningitis with Atrophy of some of the Cerebral Convolutions. The patient was a child aged nineteen months who had suffered from a severe form of congenital syphilis, for which she first came under treatment at the Children's Hospital, Chelsea, when seven weeks old. She was the first living child after four miscarriages, suffered almost constantly from nasal discharge, and only a few weeks before death had slight epiphysitis at the lower end of each femur. The birth was easy and natural, and no history of any head injury could be obtained. General convulsive attacks were frequent from two weeks old, but there was no permanent rigidity. The mother stated that at the time of death the child was like an infant of three months, never sitting up alone, and taking very little notice. Death occurred rather suddenly from a low form of pneumonia. At the necropsy the head was not enlarged and the fontanelle was nearly closed. The dura mater was lined on its inner side by a thin membrane, thickest over the vertex, and having a peculiar gelatinous appearance and consistence on its inner aspect. There was a good deal of thick gelatinous material over the convolutions and at the base of the brain, with slight excess of rather sticky fluid. Microscopically there was no evidence of recent hæmorrhage. The brain only weighed eighteen ounces, and presented large, not quite symmetrical, areas of marked pallor, depression, and hardening round each posterior limb of the fissure of Sylvius. The thoracic and abdominal organs except the lungs were healthy. The case seemed to correspond to the very rare condition described by Dr. Gowers as serous pachymeningitis. Reference was made to a somewhat similar case described by Dr. Wheaton, in which, however, there were sixteen ounces of fluid under the dura mater and the hemispheres were uniformly shrunken; also to a general sclerosis of the external surface of the brain in a syphilitic child aged twenty months, recorded by Ashby and Wright. It was concluded that the meningitis was probably syphilitic, and had led to the cerebral atrophy and sclerosis. The case also illustrated one way in which congenital syphilis may cause idiocy.

Dr. HERBERT SNOW exhibited slides of two cases of Mammary Cancer, which at one end presented the phenomena of so-called "Columnar Epithelioma" or "Duct Cancer," and at the other the Acini typical of Scirrhous Carcinoma. He contended that both the above terms embodied an erroneous principle, and that no classification of epithelial morbid growths could be based on morphological attributes *per se*. The shape of an epithelial cell was an extremely variable and inconstant quality—that of the bladder, for example, changing with its relative distension. How readily columnar cells passed on slight modifications of the environment into squamous, or *vice versâ*, had been amply proved by Bland Sutton, Shattock, Haycraft and Carlier, Roeckel, &c. The columnar shape was a common attribute of cells coating vegetations within cysts or cyst-like cavities with fluid contents, such as the bladder, ovary, and thyroid gland. The rarity of the so-called "columnar epithelioma" in the larynx showed that

columnar cells when malignant developed a lesion indistinguishable from that of squamous. "Duct cancers" of the mamma were intra-cystic carcinomatous vegetations; the cysts were much more often dilated acini than dilated ducts; the cells from which they sprung were those of the gland parenchyma, therefore identical with the parent cells of scirrhus; and any clinical differences, such as tardiness in infecting the glands, were due to the cyst wall, which constituted a rigid envelope or "capsule."—Mr. JACKSON CLARKE said that there was good clinical ground for separating such cases from cancer; it was well to retain the distinguishing term "duct cancer."—Mr. C. F. BEADLES mentioned one case in which the condition of duct cancer was combined with well-marked scirrhus of the gland.—Dr. KANTHACK said that cancer beginning in epithelial structures retained the character of the epithelium. With regard to the apparent exception of squamous cancer commencing in the larynx he stated that the lining membrane was mostly transformed into squamous epithelium soon after or during childhood, affording a good example of metaplasia. Columnar carcinoma occurring in the larynx usually arose from the lining membrane of the ventricle, which retained its columnar character throughout life. In the rectum the epithelium of surface and ducts was alike columnar, as it was in the ducts of the breast, all carcinomata in these regions being columnar unless penetrating from the skin surface. He thought the specimens exhibited were not conclusive.—Mr. BOWLBY said there might be a superficial resemblance between the two, but no real identity. He would limit the term "duct cancer" to a columnar growth having a villous arrangement, and the specimens exhibited did not correspond to this. The clinical course and naked-eye appearances were very different in the two growths. He had collected thirteen cases of "duct cancer" of the breast, the first fifteen years ago, and they were all living at the present time.—Mr. SHATTOCK adhered to the principle that squamous epithelium gave rise only to squamous-celled carcinoma, never columnar. He thought Mr. Bowlby was too exclusive in his limitation of "duct cancer." It rested with Dr. Snow to prove his contention. Referring to Mr. Beadles' case of associated "duct cancer" and scirrhus, he alluded to the evidence of metaplasia in extruded polypus of the uterus, where the columnar epithelium assumed the squamous type, and he drew attention to the fact that during development there were no fixed varieties of epithelium, pointing out that the transitional phase might continue later.—Mr. BOWLBY explained that he recognised two forms of cancer in ducts, one the villous kind, of which he had been speaking, the other a columnar form, which might be identical with scirrhus.—Dr. SNOW, in reply, said some words in pathological language were used in quite different senses, and he thought it would be a very useful step to institute a representative committee to revise the nomenclature of morbid growths. He drew attention to the variation in shape of the bladder epithelium in different states of distension of that organ.

At the conclusion of the meeting the PRESIDENT announced that on Feb. 5th Dr. Washbourn would open a discussion on Pneumococci, especially in connexion with Immunity.

CLINICAL SOCIETY OF LONDON.

Abdominal Section for Unusual Conditions.—Acute Intestinal Obstruction from Gall-stone.—Loculated Empyema.—The Antitoxin Committee.

AN ordinary meeting of this society was held on Jan. 11th, the President, Mr. J. W. HULKE, F.R.S., being in the chair.

Mr. A. W. MAYO ROBSON read accounts of Three Cases of Abdominal Section for Unusual Conditions: (1) Tuberculous Disease of the Liver; (2) Complete Volvulus and Strangulation of the Great Omentum; and (3) Traumatic Hæmorrhage without External Wound. He pointed out that his cases resembled one another only in the treatment and its results, but he hoped the cases might prove of interest individually. The first case related was one of tuberculous abscess of the liver which was treated by incision, rubbing in of iodoform, and drainage. The patient, whose illness had extended over twelve months and who was reduced to an extreme degree of weakness, had completely recovered his health. Attention was drawn to the literature of the subject, and the case as well as the treatment adopted were shown to be extremely uncommon. The second case was one of volvulus and strangulation of the omentum following the reduction of a large inguinal hernia. Peritonitis led to the suspicion of reduction *en masse*. Abdominal section revealed the whole of the omentum in a state of deep congestion verging on gangrene, connected by two twisted cords with the stomach above and the left inguinal canal below. Recovery followed removal. So far as Mr. Robson knew the case was unique. The third case was one of traumatic intra-peritoneal hæmorrhage without external wound, in which the patient was in so serious a condition that exploration to reveal the actual site of the hæmorrhage would probably have led to death on the table, but where incision, washing out with hot saline solution, and drainage had been efficient in arresting the bleeding and bringing about recovery.—The PRESIDENT said that in his experience in the post-mortem room he had never met with a large solitary caseating tuberculous mass in the liver unaccompanied by tuberculous manifestations elsewhere, and he thought it impossible to positively exclude it in the present instance. He had also never seen or read of such rotation of the omentum as was present in the second case. There was scarcely any abdominal viscus except the liver in connexion with which the circumstance of rotation had not been observed. He cited the spleen, kidney, and uterus as instances. Mr. Sutton, at the Middlesex Hospital, last year removed a spleen which had such a long stalk that it reached the left inguinal region. The stalk was twisted on itself several times. In an instance recorded in Billroth's publication the uterus had been lifted out of the pelvis by a large fibroid, and had contracted adhesions to the ascending colon, its cervical part being lengthened and formed like a strand twisted several times, around which the Fallopian tubes were twined.—Mr. EVE asked on what evidence Mr. Robson described his first case as one of tuberculous abscess of the liver. In reference to the possibility of its being actinomycosis he observed that the absence of clubs did not prove the disease not to be actinomycosis.—Mr. MAYO ROBSON explained that tubercle bacilli were found in the abscess contents, and microscopical examination showed the absence of any appearances resembling the ray fungus.—Mr. MAKINS said he did not see how Mr. Robson excluded the possibility of tuberculosis of the peritoneum in the first case. With regard to the third it struck him that when the abdomen was opened and a ruptured viscus found the operation was often too long. When a rupture of the liver was found very little could be done for it.—Mr. CROFT mentioned that on one occasion he had removed a spleen in order to arrest hæmorrhage from that organ, the abdomen at the time being full of blood. The patient was in a very marked condition of collapse and was apparently on the point of dying. As it was, she lived for some hours. He thought it was a mistake to delay ascertaining the exact source of the hæmorrhage. If it proceeded from such an organ as the spleen the chances were small of the hæmorrhage spontaneously ceasing. In all such cases an exploratory operation should be performed at the earliest possible moment.—Mr. W. H. BATTLE said there did not appear to have been any signs of rupture of a viscus, and it was quite impossible to say where the hæmorrhage came from. Such cases were always very obscure. Only last autumn he had under his care at St. Thomas's Hospital a boy who fell on his face while playing at leap-frog, and was brought in with symptoms of intra-peritoneal hæmorrhage, manifested by intense shock. There was a dull area on the left side, extending as far as the left linea semilunaris. He had been and was then vomiting, but there was no rigidity of the abdominal muscles. The dulness in the abdomen gradually extended until it reached the right linea semilunaris. The boy ultimately recovered. He had no idea where the blood came from, but he thought it might be from a torn mesentery. He raised the question as to what symptoms are to be held to justify the performance of laparotomy forthwith: would tympanites, for example, be such a sign?—Mr. BENHAM asked whether any examination was made of the chest in Mr. Robson's first case. According to Louis's law the presence of tubercle anywhere in the body was always associated with tubercle in the lung.—Mr. MAYO ROBSON, in reply, said he did not think there could be any doubt as to the tuberculous nature of the disease in the first

case. The patient was ultimately discharged as cured, and there was no trace of disease anywhere. With regard to the second case, he thought it was very difficult to account for the rotation. If in his third case he had tried to find the source of the bleeding he felt sure he would have lost his patient; even flushing the abdomen was sometimes followed by shock.

Mr. FREDERICK EVE described a case of Acute Intestinal Obstruction from Gall-stone, with Laparotomy, Removal of Stone, and Recovery. A man forty-two years of age was admitted to the London Hospital on March 19th, 1894. Four days previously he had been attacked with pain in the abdomen, vomiting, and absolute constipation. The vomiting was continuous. Nothing was ascertained by palpation. He denied having had previous abdominal trouble. Belladonna was prescribed and a large enema given, after which he passed a small fluid motion and felt easier. The next morning he was worse and the abdomen more distended. On March 20th laparotomy was performed. When the abdominal muscles were relaxed under ether a hard body feeling like a rifle bullet could be felt in the right iliac fossa; this was evidently an impacted gall-stone. It was exposed and was found to occupy the ileum two or three inches from the ileo-cæcal valve. The small intestine above the obstruction was considerably distended. The large intestine was completely empty. The ileo-cæcal orifice was brought into view and an attempt made to push the calculus through it, but unsuccessfully. The calculus was then worked up the ileum into a free loop which could readily be brought outside the abdomen, and after applying elastic ligatures above and below it was extracted through a longitudinal incision. This was closed with Lembert sutures of fine silk, a graft of omentum was attached, and the intestine replaced in the abdomen. Rectal alimentation was maintained for four days. The further progress of the case was uneventful, and the patient left the hospital after being in it about four weeks. After the operation it was elicited that eighteen years previously the patient had been subject to severe attacks of pain in the epigastrium, sometimes accompanied with vomiting. For seven or eight years he was never entirely free from pain, but about once a week had a severe attack. Ultimately the pain and attacks of vomiting ceased quite suddenly. He had never passed a gall-stone. This trouble might be referred to the presence of a biliary calculus in the gall-bladder and the sudden cessation to its passage into the duodenum; so that it might be inferred that the calculus had occupied the intestine for some ten years—a circumstance not without precedent. The calculus was cylindrical in shape and its circumference was three inches and a quarter. Mr. Eve remarked that at first the result of laparotomy for this apparently simple form of obstruction was by no means encouraging. Writing in 1889, Dufourt collected nine cases, all of which proved fatal except one in which the stone was slipped into the large intestine. Mr. Eve had collected eighteen cases occurring subsequently to this period, of which (after incision and suture of the intestine) nine recovered. This advance might be attributed to improved surgical technique, for operative interference was not longer delayed in the earlier than the later group of cases. In conclusion, the following suggestions were made with regard to treatment:—1. When a diagnosis was possible expectant treatment should be tried, as one-third of the cases of marked obstruction from gall-stone recovered without operation. 2. But operative interference should not be long delayed, as the patients were nearly all aged, the mean age being sixty-four years. 3. After opening the abdomen the calculus should, if possible, be forced through the ileo-cæcal valve. 4. If the calculus be immovable or at a distance from the valve, and the intestine healthy, the stone should be excised. 5. When the intestine was inflamed, and the stone immovable and adherent to it, an attempt might be made to break the calculus up with needles. This failing, it should be extracted, the intestine fixed to the abdominal wall near the wound, and surrounded with iodoform gauze. 6. In only one case out of twenty-seven was it found necessary to resect the intestine on account of ulceration.—The PRESIDENT observed that all would probably agree with the conclusions formulated by Mr. Eve.—Mr. MAYO ROBSON fully concurred in the utter impossibility of making any diagnosis in cases of obstruction by gall-stone.—Mr. EVE replied.

Mr. J. W. BROWNE recounted a case of Empyema associated with Hydatids of the Liver.

NORTH-WEST LONDON CLINICAL SOCIETY.

Erythematous Ulceration of the Extremities.—Hereditary Congenital Spastic Paralysis.—Nævi cured spontaneously and by Electrolysis.—Malformation of Chest.—Multiple Osteotomy for Deformity.—Exophthalmos.—Myelitis.—Hæmatoma of the Pinna.—Hallux Rigidus.—Polypus of the Frontal Sinus.

A MEETING of this society was held on Jan. 9th, Mr. F. DURHAM being in the chair.

Mr. JACKSON CLARKE exhibited a boy suffering from Ulcers on the Hands and Legs, pain in the knee, and coldness of the extremities. Bazin's and Raynaud's diseases were discussed, and Mr. Clarke distinguished the present as an unusual form of erythema iris.

Dr. GUTHRIE showed two of three children in a family affected with Hereditary Congenital Spastic Paralysis. He also showed the father, who had exaggerated knee-jerks, ankle-clonus, and a spastic gait. The mother and two other children were healthy. This disease in early infancy was thought to be rare.—Dr. CAGNEY believed the disease to be more common in very young children than was supposed.—Dr. GILL spoke of similar cases under his care.

Mr. NATHAN showed the remains of a Congenital Nævus of the Scalp. There was left a patch of atrophic skin nearly bald. The case had been mistaken for ringworm. He also showed a Nævus of the Pinna which had been electrolysed.—Mr. CLARKE thought that the first case was unique and of exceptional interest.—The CHAIRMAN discussed the treatment of nævi.

Dr. HARRY CAMPBELL showed an extreme instance of Barrel Chest in a man with Emphysema, and pointed out the manner in which this deformity affected the circulation.

Mr. JACKSON CLARKE exhibited a girl in whom both the Femur and the Tibia had been submitted to Macewen's Osteotomy Process. The result was good, and as the muscles developed there would be a satisfactory cure.—Mr. BRODIE commented on the case.

Mr. GORDON BRODIE showed a boy with Exophthalmos. The cranial bones were enlarged and the chest misshapen. The upper part of the sternum projected backwards and pressed on the trachea. The child had adenoids.—Dr. CAMPBELL indicated the high palate and the facial expression, which clearly indicated nasal obstruction. He had no doubt the latter had influenced the development of the entire cranium.—Mr. JACKSON CLARKE believed that the shape of the head was due to mechanical causes in utero.—Mr. COALL thought that the efficacy of nasal obstruction in causing remote changes was overrated.—Dr. CAGNEY regarded the deformity both of the head and of the chest as typical of rickets, and he referred to the constant association of adenoids with that disease.

Dr. HARRY CAMPBELL showed a case of recovery from Myelitis, and he advocated the use of blisters in this and other acute spinal diseases.—Mr. COALL spoke also of the efficiency of blisters combined with ergot in acute spinal diseases.

Mr. JACKSON CLARKE showed a case of Hæmatoma of the Pinna. There was no associated psychosis. The tumour grew and pain increased. He, therefore, proposed to operate.—Mr. BRODIE and Mr. RIDLEY commented on the case.

Dr. ATKINSON (for Mr. MAYO COLLIER) showed a case of Hallux Rigidus and also one of Polypus of the Frontal Sinus.

CAMBRIDGE MEDICAL SOCIETY.

Fibroid Tumour of the Uterus removed per Vaginam.—Gun-shot Wound.—Salicylates in Acute Rheumatism.

A MEETING of this society was held on Dec. 7th, 1894, Mr. HYDE HILLS, President, being in the chair.

The PRESIDENT exhibited a specimen of a portion of a Large Fibroid Tumour which he had removed per vaginam with the écraseur. The notes of this case he had brought before the society on a previous occasion.

Mr. WHERRY showed a young man who shot himself accidentally seven weeks previously. Holding a gun by the muzzle in the right hand, a charge of small shot entered the arm at the level of the axillary fold and shattered the humerus into many fragments, not injuring the artery or trunk nerves.

The bone fragments removed made up two inches and a half of the entire shaft of the humerus. These were extracted through the large aperture of entrance very slightly touched with a knife for convenience of delivery. The exit wound was made free for removal of shot. No splints or bandages were used for five weeks, but Stromeyer's cushion and shawl wrappings. When healthy granulation appeared the drainage-tube was removed and light splints applied, so that good bone union resulted. The slight congestion produced by the splints used at the later stage of treatment was probably useful in gaining union. Mr. Midelton of Harston, who brought him to the hospital, had so managed to treat the shock of this great injury that the patient was able to give answers to questions, especially as to skin sensitiveness in the injured limb. Mr. Wherry had reported a similar case many years ago in which Stromeyer's cushion was used; recovery ensued with a useful limb, but not with so little suppuration as in this case treated with modern methods of antiseptics and irrigations.

Dr. P. W. LATHAM read a paper on the Administration of Salicylates in Acute Rheumatism. He said: "We have now become so familiar with the successful treatment of acute rheumatism by means of salicylic acid and salicylates that it may seem somewhat superfluous for me to address you on the subject. But cases have come under my observation in which objections have been taken to the use of the remedies, on the ground either that they disagreed with the patient, producing nausea, vomiting, &c., or that notwithstanding fairly large doses of the drug the pains have not been relieved, the temperature has not been reduced, or most serious of all, cardiac or other complications have arisen during the time the patient was taking the remedy and when apparently he was under its influence. Now it is in preventing the development of these complications that, when properly administered, the remedy so strikingly shows its power, truly acting as a distinct specific. What fare the conditions to ensure success? In 1885 I formulated the following seven rules:—First, the true salicylic acid obtained from the vegetable kingdom must alone be employed. Secondly, give the acid without any alkali or base. Thirdly, place the patient fully under the influence of the drug. Fourthly, give the patient from forty to eighty grains daily, for ten days, after all pain and pyrexia have passed away. Fifthly, let the patient's diet consist entirely of milk and farinaceous food for at least a week after the evening temperature has been normal. Sixthly, take care to maintain a daily and complete action of the bowels. Seventhly, let the patient be enveloped in a light blanket and with no more bedclothes than are sufficient to keep him from feeling cold. The object of the treatment now is to cool the patient—not, as in former times, to sweat the poison out of him; and the cooler he is kept the sooner will the temperature be lowered.[1] The causes of failure with this remedy, as far as I have been able to judge, are: (1) insufficient doses at the commencement, (2) the non-administration of purgatives such as calomel, and (3) feeding with substances other than milk, such as beef-tea, broths, &c., especially in the earlier stages. I have seen cases where the temperature had remained at from 100° to 102° F. for several days under the administration of moderately large doses and the remedy seemed ineffectual, but on giving five grains of calomel at night, repeating it if necessary the following night, and feeding the patient exclusively on milk, the disease has at once declined and run a favourable course. The administration of calomel (followed if necessary by purgatives) is the best adjuvant to the use of the salicylates. And here I am only calling to our aid a plan of treatment which half a century ago was found to be of signal service. Referring to the three modes of treatment—by venesection, by opium, and by purgatives—which were in vogue at the time, Dr. P. M. Latham says, with regard to the last: 'As this plan of treatment works prosperously day after day in its immediate effects, so day after day it gives an earnest of the remedial impression it is exercising upon the whole disease. It abates the fever, it softens the pulse, it reduces the swelling, and it lessens the pain. In short, it subdues the vascular system like a bleeding, and pacifies the nervous system like an opiate; and often in the course of a week the acute rheumatism is gone. In three days there is often a signal mitigation of all the symptoms; and in a week I have often seen patients who have been carried helpless into the hospital, and shrieking at the least jar or touch or movement of their limbs, risen from their beds and walking about the ward quite free from pain.' Of this plan, often so striking in its operation and often so satisfactory in its results, I have some further remarks to make. It is called the purgative plan; yet its purpose is achieved by calomel and purgatives conjointly. The purgatives would not answer the end without the calomel; of that I am quite certain; neither would the calomel answer without the purgatives, unless it produced of itself ample evacuations from the bowels. It is probable, in short, that the remedial efficacy of the plan resides essentially in the calomel; in calomel, however, not as mercury, but as itself—calomel. If the specific effect of mercury—salivation—arise, it is not only beside our purpose, and against our wish, but it begets a serious hindrance to the use of calomel in sufficient quantity for the end in view. Thus the whole plan is frustrated. Having begun one plan of treatment we are obliged to take up with another. Time is lost, the case is perplexed, the disease is prolonged, and the patient perhaps injured. Now, if in the treatment of acute rheumatism you were to choose one indication and abide by it, and to trust one class of remedies, and to it only, you will find more cases that admit of a readier cure by the method now described than by either of the two former. You would find the aggregate of morbid actions and sufferings, which constitute the disease, more surely reached and counteracted and more quickly abolished by medicines operating upon the abdominal viscera only than by those which influence either the bloodvessels only or the nerves only. You would find in calomel and purgatives a better remedy than either venesection or in opium.[2] Again, there are cases in which the salicylates cause nausea or sickness; this is more marked if the salt of the artificial acid has been employed, but it does sometimes occur even after the use of the salt of the true acid. How is this to be avoided? A common form of administration is: sodii salicylatis, gr. xx; aq. cinnamomi, unciam; to which, if necessary, five grains of carbonate of ammonia may be added. Or it may be given in the effervescing form, as, sodii salicylatis, gr. xx; sodii bicarbonatis, gr. xx; syrupi aurantii, drachmam; aq. chloroformi, ad unciam cum semisse; cum acid citric, gr. xvii. Or instead of the citric acid give three drachms of lemon juice, replacing the syrup of orange by half a drachm of simple syrup. It must, however, be borne in mind that in some constitutions repeated doses of lemon juice may induce sudden prostration, as was observed many years ago when the remedy was employed in the treatment of rheumatism. Administered in any of these forms, however, the salicylate may give rise to some nausea, and a certain feeling of repugnance may be induced in the patient to the medicine. This may be avoided entirely by giving the salicylic acid itself, made up into pills, in the way I have previously mentioned. I have never seen the remedy in this form cause nausea unless it was in individuals who have a difficulty in swallowing pills. And there is good reason for it. Made up in this form the pills do not readily undergo solution in the stomach. The acid is insoluble in the acid juices there, and the pills pass on into the duodenum before solution takes place. In fact, when the bowels are acting very freely and the pills have been freely administered, I have occasionally seen them unchanged in the evacuations.[3]

[1] THE LANCET, June 20th, 1885

NORTHUMBERLAND AND DURHAM MEDICAL SOCIETY.

Rupture of Intestine.—Uterine Fibroids.—Exhibition of Fibroids. — Abdominal Tumour. — Cirrhosis of Liver. — Cholecystotomy.—Trophic Changes following Nerve Irritation.—Thiersch's Method of Skin Grafting.—Tumour of Omentum.

A MEETING of this society was held on Jan. 10th, Mr. F. PAGE, President, being in the chair.

Mr. WILLIAMSON showed a man after operation for Rupture of Intestine. Just after dinner the man fell, striking the abdomen on a chair. Two hours later hæmatemesis occurred. The patient was admitted to hospital thirty hours after the

[2] Dr. P. M. Latham's Works. New Sydenham Society, vol. i., pp. 123-124.

[3] In acute rheumatism complicated with albuminuria the use of the drug is contraindicated. Dr. Noel Paton's experiments show "that this drug has really an irritating action on the kidneys." Journal of Anatomy and Physiology, January, 1886, p. 25.

accident. The abdomen was distended, the pulse 130, and there was still hæmatemesis. The intestines were found covered with firm lymph. At the junction of the duodenum and jejunum there was found a protrusion of mucous membrane about the size of the thumbnail. The wound was enfolded and sutured, and the abdomen washed out with a saline fluid. No drainage was employed. Recovery was uninterrupted.

Mr. WILLIAMSON also showed a patient after operation for Uterine Fibroids. She was forty-seven years of age, married, nulliparous, and had suffered from hæmorrhage for two years. The uterine and ovarian arteries were ligatured, the tumour excised, the opened cavity of the uterus disinfected by the thermo-cautery, and two flaps of uterine tissue and peritoneum made and sutured together. Two weeks after operation a fibroid the size of a walnut escaped by the vagina.

Mr. RUTHERFORD MORISON exhibited a series of Fibroids treated by different methods—viz., vaginal hysterectomy; extra peritoneal treatment of pedicle; intra-peritoneal treatment of pedicle—(*a*) leaving uterus and ovaries intact, (*b*) removing tubes, body of uterus, and tumour; and total hysterectomy.

Dr. HUME showed a patient aged fifty years with a Tumour of moderate size. There was no hæmorrhage, but very severe pain. There were extensive adhesions between the tumour, the bowel, and the omentum. On separating these both tubes were found distended with pus and were removed. The tumour was drawn forwards, surrounded by a permanent elastic ligature, and the stump treated extra-peritoneally. This he regarded as the safest though not the ideal method.—Mr. PAGE referred to two cases he had shown at the last meeting, the extra-peritoneal method being employed in one of the two.—Dr. G. MURRAY said fibroids in women approaching the menopause should not be operated on. Apostoli's treatment checked the hæmorrhage and might get the woman over the menopause.—Dr. HUME, in reply, said that he had had little success from Apostoli's treatment. He still believed in removal of the ovaries, and gave details of successful cases recently treated in this way.

Dr. D. DRUMMOND showed: 1. A patient who up to fifteen years ago was a heavy drinker. He had been left with a Cirrhotic Liver, which was practically cured. The liver and spleen were both very large and were adherent to the abdominal wall, so that the anastomotic circulation was established in the abdominal wall and the portal circulation relieved. 2. A man twenty-eight years of age, who was admitted to hospital in May last with a heart beating 200 per minute; he was nervous and breathless; the symptoms came on after a fright. There were no murmurs. He had now aortic and mitral insufficiency and pericardial thrill. There had been no rheumatism until Dec. 27th, 1894.

Dr. HUME also showed: (1) Woman after Cholecystotomy; the gall-bladder was distended and contained calculi, and a large one was removed from the cystic duct by incision. 2. A patient with Trophic Changes following Nerve Injury. In April the patient received an incised wound on the inner aspect of the upper arm, and in December was admitted with the tips of the three outer fingers gangrenous, and wasting of muscles of the forearm, thumb, and interossei. The median and ulnar nerves were found divided and were sutured.—Dr. A. E. MORISON had recently met with a case of injury to the external popliteal nerve caused by a blow on the head of the fibula. There was complete paralysis of all the muscles supplied by the torn nerve and sensation was also absent. He cut down on the nerve and found a clot of blood in the sheath, but no division of the nerve itself as was expected. In a short time recovery was complete.

Mr. RUTHERFORD MORISON showed two cases illustrating Thiersch's Method of Skin Grafting.

The PRESIDENT exhibited a Tumour of the Omentum removed from the abdomen of a man. It was the size of an adult head and consisted chiefly of clotted blood.

EDINBURGH OBSTETRICAL SOCIETY.

Pseudo-hysteria in Pregnancy.—Clinical Aspects of Utero-sacral Cellulitis.—Ante-natal Pathology and Heredity in the Hippocratic Writings.

A MEETING of this society was held on Jan. 9th, Dr. BARBOUR, President, being in the chair.

The PRESIDENT read notes on a case with symptoms of Pseudo-hysteria in Pregnancy, going on to apparent dementia. Death occurred shortly after labour. The child was born dead, with contractions. The patient, who was six months pregnant, became feverish and fretful, and showed different hysterical symptoms. She afterwards had fugitive rigidity of the limbs and ultimately contractions and paralysis; she was subject to flushings and the reflexes were increased. There was great difficulty in swallowing, and as the disease developed she passed urine and fæces involuntarily. Her face acquired an imbecile aspect, and her general appearance and condition were similar to that of dementia. It was decided to induce labour, but this occurred spontaneously. With each pain the patient had an epileptiform convulsion. After two hours and a half a more severe fit occurred, evidently causing the death of the child, as no fœtal movements could be felt or the heart heard after its onset. As the patient's pulse failed the labour was completed with the application of the forceps. After delivery all paralysis disappeared, only a little contraction remaining. On the third day the temperature rose to 105° F. and the patient died. At the necropsy there was no evidence of syphilis found in any organ. The kidney showed some small cortical abscesses. There was no other evident pathological condition found except in the brain. The pia arachnoid was thickened and opalescent over the hemispheres and vertex. The arteries had local thickenings of the walls, and a thrombus had formed in part of the basilar artery. Recent softening of the brain was found, affecting part of the convolute nucleus and extending to the base. The arteries showed endarteritis, and the capillaries had their nuclei multiplied. The whole condition was one similar to that usually found in dementia, the paralytic symptoms being due to commencing changes in the vessels. The fœtus, which died during labour, showed contractions of all the limbs, with flexure of the fingers. It, strangely, had contractions affecting its limbs exactly similar to the mother. These persisted for eighteen hours after birth, and were evidently not due to rigor mortis.

Dr. WILLIAM FORDYCE read a paper on the Clinical Aspects of Utero-sacral Cellulitis, giving the results of cases where the disease was present as a pure disease without complication. It was found in nulliparæ and multiparæ, most frequently in the latter. The cause was found in septic infection from the endometrium or cervix, constipation, or fissure of anus. The symptoms usually complained of were pain in the back, sterility, dyspareunia, frequent micturition, pain on defecation, and dysmenorrhœa. He considered the form of dysmenorrhœa pathognomonic of pathological anteflexion. The pain occurred during the flow and in inverse ratio to the amount of the flow. As the flow diminished the pain increased.—An interesting discussion followed, in which Professor Simpson, the President, Drs. Ballantyne and Haultain, and others took part.

Dr. J. W. BALLANTYNE read a paper on Ante-natal Pathology and Heredity in the Hippocratic Writings. These works were evidently the collected observations of different writers of the time of Hippocrates. They were well acquainted with the luxation of joints in infants and described fully the appearances of club-foot. Their view of heredity was based on the theory that the generative material was derived in certain proportions from the different humours of the body. Maternal impressions were noticed by them, and ante-natal diseases and injuries were described.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on Wednesday, Jan. 9th, at 11, Chandos-street, Cavendish-square, Mr. Christopher Heath, vice-president, in the chair. Mr. Heath moved, from the chair, a resolution expressing sincere sympathy and condolence with the president, Sir J. Paget, on the bereavement he had sustained through the lamented death of Lady Paget. Two new members were elected, and the deaths of three reported. There were no fresh applications for assistance. A sum of £1193 10*s.* was voted for distribution among the fifty-three widows, nine orphans, and four orphans on the Copeland Fund. The expenses of the quarter amounted to £77 17*s.* 6*d.* The Christmas present (£303) had been given on Dec. 19th to the widows and orphans in receipt of grants, £5 to each widow, £2 to each orphan, and £5 to the orphans on the Copeland Fund.

Reviews and Notices of Books.

The Life of Richard Owen. By his Grandson, the Rev. RICHARD OWEN, M.A. Two Vols. London: John Murray. 1894.

THESE entertaining volumes depict the life of our great palæontologist mainly from its social and domestic side. Notwithstanding the engrossing nature of his scientific labours, he went much into society, played chess and the violoncello with some skill, ardently admired the drama, and was altogether a man who had many friends and some opponents as well. Prime Ministers, Church dignitaries, and peers figure largely in these pages, and there are more than occasional glimpses of exalted personages such as members of our own Royal Family, the Emperor of Brazil, the Queen of Holland, and some others. A very large number of the letters written and received by Owen have been preserved, and both he and his wife were indefatigable diarists. The wealth of material thus provided has been skilfully manipulated by the biographer so as to produce a smooth and almost continuous narrative, consisting in no small degree of the actual phraseology employed by the Owens and their correspondents. The interest of the story is maintained from first to last. There are no abstruse technical disquisitions likely to be tedious or unintelligible to the general reader, nor is there any trace of the learned polemics in which Owen was involved; but the scientific references and details with which the books abound are introduced incidentally, as it were, in the order of their occurrence and in the parts of the biography with which they are naturally connected. Owen's home life seems to have been singularly untroubled and happy. Deprived in infancy of his father, who was a West India merchant, he and his sisters were brought up in Lancaster by their mother, a woman evidently well fitted in every way for her charge, and constantly regarded with the warmest affection by her son. As soon as he presented himself at St. Bartholomew's Hospital in 1825, after quitting Edinburgh University, he had the good fortune to secure the patronage of Abernethy and to be made his prosector. In the following year he became a Member of the Royal College of Surgeons of England, and, through Abernethy's instrumentality, was appointed assistant to the conservator of the somewhat neglected museum which had been purchased by the Government from John Hunter's representatives and handed over to the Royal College of Surgeons. The connexion with the Hunterian Museum thus begun was continued for thirty years, being terminated only in 1856, on his appointment to be superintendent of the Natural History Departments of the British Museum. In 1830 he became a life member of the Zoological Society, and in the following year contributed to their proceedings eight papers on the anatomy of various animals. In 1830 he made the acquaintance of Baron Cuvier, in whose department of research he was destined to labour so successfully. Cuvier died in 1832; Owen was occupied solely with the Hunterian Museum Catalogue and with zootomy until 1837, when he produced his first palæontological paper, a Description of the Cranium of the Toxodon Platensis, but he had already attracted the attention of scientific men by his Memoir on the Pearly Nautilus, published in 1832. In 1834 he was elected a Fellow of the Royal Society. In 1835 he married Caroline Clift, daughter of the Conservator of the Hunterian Museum; they had one son, who died in 1886, leaving a widow and family. In 1837 Owen was appointed to the newly-created office of Hunterian Professor to the Royal College of Surgeons. An incident which illustrated his sagacity, and moreover took an unusually firm hold of the public mind, occurred in 1839. A seafaring man had brought from New Zealand a solitary fragment of a long bone, and wishing to find a purchaser he submitted it to Owen, who published a description of it, with the announcement that it had belonged to a gigantic bird allied to the ostrich family, but hitherto unknown to ornithologists. This surprising inference was at first received with some incredulity, but was amply verified in 1843 and subsequent years by the arrival in this country of complete skeletons of the extinct bird called "moa" by the natives of New Zealand and named Dinornis by Owen. In after years many strange anatomical queries were in all seriousness addressed to him, of which whimsical instances are recorded in the biography, perhaps the most remarkable being a personal inquiry made by the Chief Spoon and Ladle-maker to the Commander of the Faithful. This official brought from the Sultan's jewel-house to the Museum a most beautiful ladle, the bowl of which was of a fine horny material supposed to be the beak of the phœnix, and he explained that the object of his mission was to obtain accurate scientific information regarding this bird. Owen, however, after some research discovered that the bowl of the ladle was made from the beak of Buceros galeatus, a rare bird found in Ceylon.

Owen's great triumph in his later years was the creation of the magnificent Museum of Natural History at South Kensington. The space available for zoological specimens in the British Museum being altogether inadequate, he in 1859 "submitted a strong report to the trustees setting forth his views as to a National Museum of Natural History, accompanied with a plan." The scheme was considered by a committee of the House of Commons and was ultimately rejected, its foremost opponent being an Irish member, the representative of county Galway. In 1862 the scheme was again brought before Parliament, being introduced by Mr. Gladstone, as Chancellor of the Exchequer, but it was defeated. In 1863 Mr. Gladstone obtained leave from the House of Commons to purchase land for the building, and eventually eight acres of ground were acquired at South Kensington. The removal of the specimens from Bloomsbury to the new building at South Kensington was commenced about 1880 and occupied some years. In the end of 1883, being advanced in his eightieth year, and in the possession of almost all the honorary scientific distinctions which could be conferred on him, the enumeration of which occupies more than three pages of the second volume, Owen retired from his official duties in relation to the national collections of natural history. He had witnessed the complete success of his efforts in their behalf, and, as he himself wrote, felt that he could now depart in peace. Professor Flower was appointed to the vacancy, and Owen withdrew into private life with the dignity of K.C.B. and a pension, which was augmented at the instance of Mr. Gladstone. His declining years thereafter glided serenely away, until the peaceful arrival of the closing scene in December, 1892.

Three photogravure portraits of Owen at different periods of life are a material addition to the value of the narrative, two of them forming frontispieces to each of the volumes. The author has naturally found his theme congenial, and there need be no hesitation in predicting for his work a permanent place in the literature of biography and personal anecdote.

Pulse Gauging: a Clinical Study of Radial Measurement and Pulse Pressure. By GEORGE OLIVER, M.D. Lond., F.R.C.P. London: H. K. Lewis. 1895.

ANY means of increasing our reliable information concerning the indications for diagnosis and treatment afforded by the pulse ought to be, and no doubt will be, welcomed by the profession. In pulse gauging by the arteriometer and the pulse pressure gauge Dr. Oliver has at present a practical monopoly, for, although we believe instruments for gradually compressing the pulse to obliteration have been in use before,

the more elaborate and accurate instruments to which we have referred are of his own invention. Unlike the sphygmograph, which affords us information of a kind difficult to obtain by tactile methods, the instruments with which we are at present concerned are intended to afford more precise information concerning conditions which are often very fairly estimated by the time-honoured means of "feeling the pulse." Into feeling the pulse the personal equation no doubt enters very largely; the sensitiveness and intelligence of the individual are variable quantities. Mechanical instruments, on the other hand, ought to be more alike; but all such should, we think, before being sold to the profession, be tested, like thermometers, by comparison with a reliable standard. Otherwise the variation of man is introduced into the automatic machine. In the use of instruments, moreover, as in observation generally, there are sources of fallacy—many, no doubt, avoidable—which require to be well known to be eliminated. A knowledge of these only comes by experience and usually by the discovery of error. How *not* to do anything frequently precedes a knowledge of how to do it. The only justification for the multiplication of our means of observation, and for the substitution for our naked senses of mechanical aids, is the inadequacy of our present means and of our unaided senses to investigate the conditions for which such increased aid is introduced. In estimating the practical value of the work before us these appear to us to be considerations which must be borne in mind. They are not ignored by the author. While by the finger we can form a general idea of the size of the radial pulse, it must be admitted that its calibre can be more exactly measured by means of such an instrument as Dr. Oliver's arteriometer, and, this once exactly noted, an increase or diminution may be ascertained more certainly than if we trust to the memory of our impressions. This is important, as it has been found that the same vessel may under different circumstances vary in this respect, and evince peculiarities in disease which distinguish conditions of health from those accompanying a morbid state. Such peculiarities may be, and have been, determined without instrumental aid, but precision may be imparted to our conclusions by employing the arteriometer and pulse gauge. Whether such precision is of sufficiently great importance for practical purposes to bring this instrument into even such general use as the sphygmograph may be questioned; but that it may be of great value in scientific investigation and education is, we think, highly probable. Not only, however, as an instrument of precision in scientific investigation, but also as an instrument of practical utility in "selecting and adjusting remedial measures," has Dr. Oliver found his instruments serviceable. "The pulse instruments have specially demonstrated the great restorative value of such physiological agencies as recumbent rest, exercise, diet, massage, baths, and mineral waters." Such data could no doubt be attained by the experienced physician by tactile methods sufficiently well, but it is also probable that the less experienced observer could by instrumental aid gain truer criteria than by the use of the unaided finger. Just as the pleximeter and hammer of the student usually give place to the more convenient fingers when the examiner has learned to trust them, so, also, will the latter from their very convenience tend to supplant the ingenious and accurate instruments Dr. Oliver describes. As an aid to the education of the hand we believe they may be of great value, and as such the author acknowledges their utility. For fuller particulars as to the construction of these instruments and the general results of pulse gauging obtained by their aid we must refer our readers to the very handy little volume before us. The labour which has been bestowed in collecting data, the care taken in checking known sources of fallacy, and the intelligence and caution evinced by the author in stating his conclusions cannot be too warmly acknowledged. Dr. Oliver's work, carried out largely, we understand, in the midst of the duties of active professional life, also demonstrates an oft-proved truth—namely, that the harvest to be garnered by members of our profession in every sphere is truly great, and that well-equipped labourers cannot be too numerous to contribute each a fruitful sheaf towards the common store of useful material. Dr. Oliver's excellent work is such a sheaf, and we cordially commend it to our readers.

Lehmann's Medicin. Hand-Atlanten, Band vii. Atlas und Grundriss der Ophthalmoscopie und Ophthalmoscopischen Diagnostik. Mit 5 Text- und 102 farbigen Abbildungen auf 64 Tafeln. Von Dr. O. HAAB, Professor an der Universität und Direktor der Augenklinik in Zürich. (*Lehmann's Medicine.* Hand Atlases, vol. vii. Atlas and Outline of Ophthalmoscopy and Ophthalmoscopic Diagnosis. With 5 Illustrations in the Text and 64 Coloured Plates containing 102 Illustrations. By Dr. O. Haab, Professor at the University of, and Director of the Ophthalmic Clinic at, Zürich.) München: Lehmann. 1895.

THIS manual, which fully deserves its name, presents, in a cheap and compact form, a series of plates in which the characteristic features of the principal diseases of the fundus of the eye are very well given. Though perhaps not quite equal in finish to the plates illustrating the larger works on ophthalmoscopy, they are still so satisfactorily printed that the student may feel sure, if he is well acquainted with the aspects of disease as here presented, there will be very few forms of retinal lesion that will give him any difficulty to diagnose. Some of the plates, as those of optic neuritis with retinal hæmorrhage consequent on the growth of an orbital tumour and those of the changes of the fundus in pernicious anæmia, in albuminuria, diabetes, and pregnancy are very good. Every figure is preceded by a short descriptive account, and we append a translation of one of these that their length and character may be understood by our readers: "Fig. 39: Retinal trouble from a blow on the eye; Bertin's cloud; commotio retinæ; erect image, somewhat diminished. This disturbance of the retina, frequently observed after blows inflicted on the eyes with blunt instruments, was first studied and described by Bertin. The lesion is transitory, so that it is more distinctly visible the earlier the eye is examined after the accident. It is most frequently occasioned by blows with the fist or stick, or from stones or snowballs. In many instances, two quite distinct, milk-white spots may be seen on the retina, one of which is at the point where the eye was struck whilst the other is at the region of the macula lutea. The former is usually the larger, more pronounced, and more persistent of the two. The macula and the vision may be unaffected. The peripheric opacity does not, as a rule, conceal the retinal vessels. The appearances presented were formerly often mistaken for detachment of the retina from the choroid. The nature of the opacity has not as yet been satisfactorily made out. Our illustration was taken from an eye which a few hours previously had been injured by a blow with a snowball." We may add that eight of these hand-atlases have been published and that nine more are to follow.

Traité Pratique des Maladies du Système Nerveux. Par J. GRASSET et G. BAUZIER. 4me Edition. Montpellier: Camille Coulet. Paris: G. Masson. 1894.

THE two immense volumes, each containing over 1000 pages, which compose the latest form in which Grasset's classical work has appeared, really constitute a fresh work, and they are characterised by the great care in research, the graphic presentation of facts, and the firm grasp of clinical characteristics and details which have been a feature of all the previous editions. The work has been subjected to the most thorough revision, and much fresh material has been added so as to make it, as we

have indicated above, almost a new book. The scheme is a very comprehensive one. There are six parts in all, the first being devoted to Diseases of the Brain, the second to Diseases of the Spinal Cord, the third to Diseases of the Medulla Oblongata, the fourth to Diseases of the Membranes, the fifth to Diseases of the Nerves and Neuroses, and the sixth to an account of the Nervous Manifestations of General Diseases. Each part is divided into a series of articles, and each article is subdivided into chapters. Thus, in the third part, dealing with diseases of the bulb, the first article or division is devoted to an account of localised lesions, and of its two chapters, the first deals with hæmorrhage and the second with softening. The second article or division is concerned with inflammation of the bulb, and its two chapters have as their respective headings Labio-glosso-laryngeal Paralysis — the ordinary bulbar palsy—and Acute Bulbar Paralysis.

It is almost needless, and indeed it would be impossible in such an article as this, to do more than merely indicate the aim and scope of such a work as that under review. Anything like a detailed examination of its varied excellence would be out of place and unnecessary. It is sufficient to say that it more than maintains the high standard arrived at in its predecessors; that every chapter is a perfect mine full of the richest ore, and can be regarded not only as itself furnishing the views and experiences of the two eminent neurologists who are responsible for the book, but as also indicating to the reader the various other sources from which knowledge of the particular condition has been derived. The only subject to which we should have expected more space to be devoted is that of epilepsy, and it is, we venture to think, a pity that a fuller account of epilepsy and Jacksonian epilepsy should not have been furnished, and that the two diseases should have been separated, apparently through the exigencies of the classification adopted, and not placed together in the book. The pleasant and clear, if somewhat discursive, style in which it is written, the varied and striking figures and diagrams with which the text is illustrated, and the excellent tables and indices which are added to it, all combine with the matter itself to form a book which is at once a monument of industry and ability, and a valuable and reliable guide to all whose work leads them to the study of nervous cases and neurological problems.

New Inventions.

AN APPARATUS TO ASSIST IN THE ADMINISTRATION OF THE BATH.

IN the report of a clinical lecture on the method of using the cold bath in typhoid fever, by Dr. William Osler,[1] he draws attention to the difficulties of lifting the patient out of the bath. In the case he describes the patient was given thirty-six baths. I recently had under my care a strong, heavily built man suffering from typhoid fever, and even with the aid of two nurses I experienced the greatest difficulty in lifting him into and out of his bath. I therefore had fitted to the bed an apparatus which answered my purpose. The legs of the sheers were tied to the foot of the bed, where they remained firmly in position. I attached a "luff tackle purchase" to either end of the crossbeam, and from the lower block of each purchase hooked the end of a common Indian hammock. By placing a sheet over the hammock and spreading both out flat on the bed the patient was able to roll on to them without inconvenience. Now, by the multiplication of power effected by the combination of pulleys the patient is raised off the bed with the greatest ease to the position shown in the illustration, and when suspended is readily pulled over the edge of the bed and lowered gently into the bath. In taking the patient out of the bath the pulleys are of great use. The hammock containing the sheet and patient are raised clear of the surface of the water and retained in this position for a few seconds, to allow the sheet and hammock to drip into the bath until fairly dry. The patient is then raised to the level of the bed and gently pushed over the edge on to a rubber sheet, whence, after drying, he rolls to his original place at the further side of the bed, and the mackintosh, wet hammock, and sheet are removed. As the bath may have to be given frequently—i.e., in typhoid fever perhaps whenever the temperature is above 103·5° F.—it is very important to have some such means in private

practice by which two nurses, or even one, can give the baths without much trouble. I therefore trust that in bringing this apparatus before the members of the profession a valuable therapeutic measure may be rendered easy in those details of its application which so often mean the difference between success and failure. Any carpenter can fix together the beams necessary for the two pairs of sheers, and the whole can be placed in position within a couple of hours.

G. CALDWELL STEPHEN, M.D.

Evelyn-gardens, South Kensington.

[1] The Medical News, Dec. 3rd, 1893.

"THE SENSITIVE FINGER COVER."

WE have received from the Manchester Novelty Manufacturing Company a little appliance which we can conceive may be of considerable practical value to surgeons and dentists. It consists of an indiarubber membrane fashioned into a finger cover, and so thin that for all practical purposes the sensitiveness of touch is retained. Many circumstances arise in practical surgery where examination by the finger is an absolute necessity, and in some of these circumstances, if the finger can be covered and yet no loss of "erudite touch" follow on the protection, considerable gain in personal comfort will accrue to the medical attendant, a fact which holds good to a marked extent in the practice of dentists. As a rule, and within certain limits, the fewer of such adventitious aids introduced into surgical practice the better, for their multiplication must always mean the multiplication of the sources of infection against which aseptic measures have to be taken; but the exploring finger is so frequently required in places where protection against the ills that might follow upon a tiny wound of or a crack in the skin would be very necessary that we have no hesitation in recommending these little finger-caps to the medical profession. We may add that we have tested them practically, and can report that the sense of touch is not perceptibly impaired by their use.

THE LANCET.

LONDON: SATURDAY, JANUARY 19, 1895.

WE have already, through the promptness of our correspondents, been enabled to place before our readers, not only the programme of the proceedings taking place in Calcutta during the Indian Medical Congress, together with an official list of the communications received at headquarters which would be read or taken as read before the different Sections, but also a few assorted papers. This week we give an abstract of the presidential address delivered by Surgeon-Colonel ROBERT HARVEY at the inauguration of the Congress, and commence a full account of the proceedings in the various Sections, choosing for earliest issue the papers delivered before the Section of Medicine. As an eloquent exposition of the practical use of such a Congress as that which has just come to a conclusion, Surgeon-Colonel HARVEY'S words need no reinforcement. We commend them to our readers that they may see in them, as we do, unmistakable proof that the pioneers of sanitation in India form remarkable examples of our national energy, taking upon itself to act under circumstances where action would seem to a less resolute and less enthusiastic spirit absolutely hopeless.

There are many side issues, any of which, considered singly, might be considered to justify the holding of an Indian Medical Congress. From the purely scientific point of view a congress of medical men whose life work has been largely done in the East should result in the dissemination of knowledge of disease well-nigh invaluable—whether for what it is or for what it might lead to—to their Western brethren. There are questions constantly arising in scientific medicine—practical, clinical, and of the laboratory alike—which the discussions at such a congress might be expected to assist us to answer. Some are questions of fact. As an example: Who should and who should not, in view of his medical history, follow an occupation that would necessarily take him to India? Some are questions of theory. As an example: Do telluric and atmospheric conditions change the type of a disease, the cause remaining the same, and the differences being only due to the environment? And between these two typical questions fall numberless others, no less obvious and important, to which the deliberations of an Indian Medical Congress might help us to reply. To serve this purpose alone would be doing inestimably useful work. Again, from what we may term the medico-social point of view, the holding of an Indian Medical Congress is of the highest importance to us all. A large number of our countrymen, as well as a large number of Her Majesty's faithful subjects who are bound to us by the tie that they own a common rule with us, pursue their medical careers and live the whole of their medical lives in India practically separated from personal touch with all our work. They read of us a little and we read of them a little, but the little only serves to reveal to both how real the separation is. We know of the work they do, and we know how splendidly it is done, but we only obtain such knowledge in an abbreviated and desultory form. It is good, then, that we should be able to gather from the proceedings at a congress holden in the capital of our Eastern Empire, in carefully prepared papers sent from all quarters of the realm, a bird's-eye view of the position of medicine in India at the present day—good from the point of view of fellowship as much as of learning. And again we may say that if the Congress served this purpose alone it would be doing inestimable work.

But Surgeon-Colonel HARVEY placed the whole matter on higher grounds than any of these when he chose as the subject of his presidential address the sanitary needs and aspirations of India. The diffusion of knowledge counts for much, the establishment and maintenance of a wide professional sympathy counts for more, but the public health of our enormous Indian Empire counts for most. The progress that has recently been made in this direction serves only to show and to bring into a more prominent position the acute need for further work. Thirty years ago sanitary work was undreamt of in India. None of the means that now exist for grappling with the periodic visitations of famine and epidemic disease had been discovered; while the distinct caste systems and the common fatalism made the inhabitants of the country positively averse to taking any steps towards the amelioration of their unhygienic conditions. Thirty years have seen immense changes in every direction, in the face of difficulties which no one who has not sojourned in India would be able to appreciate; yet the Indian wants, in the words of Surgeon-Colonel HARVEY'S apt quotation, "most everythink" sanitary. His hut village is built regardless of all hygienic rules as to its site or ventilation; he lives with his live stock and drinks from the pond in which they wallow; and if he should chance to have a well he places his dung-pit in juxtaposition to it. It is in a country more than half as large as Europe where such general conditions prevail that Surgeon-Colonel ROBERT HARVEY cheerily pleads the cause of sanitation. And, before all things, this is the cause the Congress should most advance, and a better one no congress could have. In spite of the almost insuperable difficulties progress has been made, and we know that it will be made. But let us in England give some measure of thought to what the task has meant and will mean to those who are carrying it out.

We heartily congratulate Dr. W. J. SIMPSON and Surgeon-Captain D. M. MOIR on the successful termination of their arduous labours as secretaries of the Congress.

THE question as to what is the best treatment in cases of fibroid tumours of the uterus is one of considerable and very general interest, for such tumours are among the commonest morbid conditions met with in the class of diseases peculiar to women. It will be as well, in order to avoid misapprehension, to define a little more clearly the group of cases the treatment for which we especially propose to consider. To begin with, we may at once dismiss cases of fibroid polypi and cases where the interior of the uterus is occupied by a fibroid so far projecting into it that but little of the growth remains embedded in the uterine wall—where, that is to say,

although there is not actually a polypus, yet the attachment of the fibroid is very limited and superficial. In such cases all competent authorities are agreed that removal of the polypus or tumour is the proper treatment, and at the present day the operation, skilfully performed with all antiseptic precautions, is almost free from risk. It is not with cases of this kind that we are at present concerned, but rather with all the others, these only excepted. Let us take, for example, a case of fibroids where the uterus is enlarged, so that it reaches as high as the level of the umbilicus, or higher; where, after dilatation of the cervix, it has been ascertained that there is no submucous fibroid capable of being safely removed per vaginam; where the symptoms commonly met with in such cases are well marked, more especially menorrhagia, dysmenorrhœa, and pressure symptoms, varying in severity with the size or position of the growth; and where, besides, the usual medical treatment of a palliative nature has proved to be unsatisfactory. What is the proper treatment? The answer to this question will become apparent if we sketch briefly the history of the operative treatment of uterine fibroids since the year 1855. We believe that the first hysterectomy for fibroid tumour of the uterus which was deliberately undertaken was successfully performed in that year by KIMBALL in America. After tying the broad ligaments he transfixed the cervix and tied on each side, leaving the ligatures long and hanging out of the lower angle of the wound. A glass drainage-tube was used. Although this case did well, two other patients on whom he operated died. Then came the era of the extra-peritoneal method, in which the stump was clamped and fixed outside in the abdominal wound, an era especially associated with the names of KOEBERLÉ, PÉAN, and KEITH. The general adoption of the intra-peritoneal method of treating the pedicle in ovariotomy soon led to many ingenious attempts to apply the same principle to the stump after supra-vaginal hysterectomy. The very multiplicity of these methods goes to show that no one of them proved to be really satisfactory, and in fact none of these earlier methods were found to provide adequate security against secondary hæmorrhage occurring from the stump. Meanwhile the removal of the uterine appendages in cases of fibroid tumour was introduced with the object of bringing about as a result of the operation those retrogressive and beneficial changes that occur in a certain number of patients with fibroid tumours after the natural menopause. This operation, which is not possible in many cases, and which in many others is not entirely satisfactory in its results, has yet, and as it were under protest, held its place up to the present time. Quite recently Dr. CULLINGWORTH published an important contribution to the literature of this operation in the St. Thomas's Hospital Reports, in which an account is given of twenty cases of fibroid tumour in which he removed the uterine appendages. The conclusions at which Dr. CULLINGWORTH arrives as regards the operation are, among others, that it affords an almost certain means of relieving all the more dangerous pressure symptoms in cases in which active treatment is necessary and where the removal of the tumour is either impracticable or very dangerous. He considers it to be unsuitable in cases where the tumours have attained a very large size, or have become œdematous, or have undergone cystic or other changes. He also thinks that the field for this operation will become still further restricted in proportion as the technique of abdominal hysterectomy improves, and its mortality in consequence diminishes. In fact, we may say with a recent American writer (Dr. BALDY) that the removal of the appendages for fibroid tumour must be considered "an incomplete operation with a limited application." We may undertake it when we do not feel justified in performing the operation that promises more complete and immediate relief — that is, supra-vaginal hysterectomy. Many prominent operators in America and on the Continent have gone a step further, and now practise total extirpation of the uterus in cases of uterine fibroid, in this way avoiding any question of the extra-peritoneal or intra-peritoneal treatment of the stump. CHROBAK reported seventeen successful cases of total extirpation for fibroids. His operation consisted of two steps—first the supra-vaginal amputation of the uterus, and then the removal of the cervix. Since then he has, we believe, given up the latter step, and now only removes the supra-vaginal portion of the uterus after ligature of the uterine arteries. We should be disposed to regard this as the ideal operation, and to look upon total extirpation as unnecessarily radical, especially as the operative procedures involved in removing the cervix are by many considered as more difficult than those needed for the other and more essential part of the operation. There can, at all events, be no doubt that total extirpation weakens the pelvic floor and produces a greater disturbance of the natural relations of the vaginal fornices, besides which there is the additional risk involved in placing the vagina in communication with the peritoneal cavity. The truth really is that total extirpation for fibroids was introduced with the view of avoiding the risks—especially of secondary hæmorrhage and sloughing—believed to be inseparable from leaving the stump of the cervix when treated by the intra-peritoneal method of SCHROEDER and his followers, and ligaturing it *en masse*. It has now been shown that, by tying the uterine arteries before amputating the body of the uterus, the danger of secondary hæmorrhage may be avoided, and, further, that so long as no sutures or ligatures are passed into the tissues of the cervix itself, and no dilatation, scraping, or cauterising, or, indeed, any interference, is employed as regards the cervical canal, and also provided that the peritoneal flaps are sutured over the stump, there is little or no risk of infection to be feared from that direction. To Dr. BAER of Philadelphia largely belongs the credit of perfecting this method and describing the details of the technique in such a manner that the operation by his method may be clearly understood and practised by others; though Mr. MILTON of Cairo reported in the columns of THE LANCET[1] cases operated on by a method very similar to that employed by Dr. BAER. Last year Dr. BAER was able to report that he had performed thirty-four abdominal hysterectomies by his method of intra-peritoneal treatment of the pedicle, with only two deaths. As such a series of successful cases is sufficiently extensive to eliminate the influence of mere good fortune

[1] THE LANCET, Nov. 29th, 1890.

we cannot do otherwise than conclude that the method by which such a result has been obtained must be based on sound principles. A mortality of less than 6 per cent. in a series of thirty-four cases speaks for itself. We have little doubt that Dr. BAER's method of abdominal hysterectomy for fibroids will eventually be much more frequently undertaken in this country. Though no series of cases such as his own has yet been published from among the cases of operators in England, we understand, nevertheless, that several operations according to this method have been performed in London with good results, and no doubt we may expect before long that an account of them will come before the profession.

THE determination shown by the Cork medical men in the matter of clubs is far more than a local matter. We are not always accustomed to regard Irishmen as examples of cohesion and organisation. The sharp differences of race and religion in Ireland and the warmth of the national temperament readily lend themselves to differences and even to discord in action; but here is a body of men, numbering nearer seventy than sixty, practically unanimous and acting as one man. Besides their unanimity there is another secret of the strength of their position—viz., the reasonableness of their demands. They ask that the club system shall be restricted to those for whose convenience it was originally created. If the profession in Cork were insisting on terms which would embarrass the decent poor they would have no sympathy from either the public or the profession. Medicine is not a luxury as law is in a certain sense; it is essential and indispensable. The poor man and the poor man's wife and children need it as much, and in some respects more, than the rich man. Medicine has to do for the poor what comfortable circumstances and pleasant holidays will sometimes do for the rich. Its aid is so indispensable that if it cannot be paid for it must be given gratuitously or provided by the State. So true is this that the poor run to the medical man as to a kind of providence at all hours of the day and night, and have so regularly been met by him in a spirit of kindness and humanity that it has come to be almost forgotten that he is a man with many wants, whose education is costly and whose work is more so. This mistake is to some extent corrected by the club system. The wage-earning classes have many members who employ their own private medical man with great advantage to themselves. They pay him fees proportionate to their means rather than to the value of his services; and he is pleased to have such patients. But, obviously, it is right in this indispensable profession to make arrangements with the wage-earning classes for attendance on terms of accommodation. This is done everywhere. And everywhere it is found liable to abuse. Persons, and whole classes of persons, who are perfectly able to pay the ordinary charges for medical attendance, join the clubs and take advantage of terms which were meant for others. The very fact that one of the new rules objected to in Cork is that the wage limit for medical attendance in clubs shall be £200 is significant of the enormous abuse—we had almost said demoralisation—to which the system has led. We should have thought that any family whose joint income was £200 or over would have made it a point of honour to have a private medical man and to pay him adequate fees. That bankers, vintners, shipbuilders, and merchants of all sorts should have taken the services of a club medical man on club terms, and think it consistent with Irish honour, could not have been anticipated. The wonder is, not that the medical men of Cork are now resisting such arrangements, but that they have borne with them so long. They may feel assured that they have the sympathy of the whole profession in the stand which they are at present making. It would be wrong to doubt that many of the comfortable and well-to-do classes who have abused the club system of Cork have done so thoughtlessly and without intending to be shabby to a great profession. But the present crisis in Cork removes this excuse. They now know that they are in a false position and that they have duties and debts to medical men which cannot be discharged on club terms. They will find medical men entirely reasonable, not expecting the impossible or the impracticable, but expecting, on the other hand, that which is their due.

The encouragement of medical practice is the duty of every citizen who has it in his power. In encouraging medical practice he is encouraging medical science, and this is a duty binding on every member of a civilised community. We are unwilling to believe that any intelligent citizen will refuse to admit this, or will deny our right as medical journalists to hold high the claims of medical men to be treated with individually and on terms corresponding to the special education they bring to the service of a community. And our right is also indisputable to point out to all members of the medical profession that this movement in Cork has a claim to their help and sympathy. It is said that the younger members of the profession there are working with perfect faithfulness to the principle involved and with much self-sacrifice. It is a temptation to them to profit by the faithfulness of others; but they have shown themselves above all such temptations. All honour to them. The duty of outsiders in such circumstances is obvious. Is the medical profession to be the only one in which there is to be no *esprit de corps?* May men come from Dublin and London and Belfast and take the places of those who are making a stand for the most reasonable rules? To put such questions is to answer them. Let no man who does so imagine that he is doing a good or a noble thing. This is a domestic quarrel in Cork between those who perfectly respect each other, and nothing in medical ethics is more clear than that the stranger who interferes is disloyal to his profession.

THE agitation in favour of the new scheme proposed by the Royal Commissioners for a reconstitution of the University of London, so that it may become a local Teaching University for London as well as an Imperial Examining Board, has again come to the front. On Tuesday next, the 22nd inst., at noon, a deputation from the various bodies which have expressed a general approval of the scheme will wait upon the Premier and urge upon him the desirability of appointing a statutory commission to frame statutes and ordinances in general conformity with the report of the Gresham Commission. Later another deputation,

consisting of graduates who think that if a local Teaching University for London be desirable it ought to be constituted apart from the existing University of London, will also be received by the Premier. He will thus have the great advantage of hearing both sides of the question in virtual simultaneity: that of the teachers anxious to enlarge the scope of the existing University, and that of the graduates who are naturally anxious that the prestige of their degrees should not be lowered, as is possible by the proposed changes. By a curious coincidence the next meeting of Convocation of the University is appointed for the same day at 4 P.M., and the members thereof will be occupied with the same business.

On May 8th, 1894, it will be remembered, Convocation adjourned after the whole question of the constitution of the University had been referred to the Annual Committee, with power to nominate members of a joint consultative committee of the Senate and Convocation. But owing to a technicality it was afterwards found that any nominations made by the new Annual Committee might be objected to as invalid, and so the resolution was not acted on. Four delegates, however, attended the meeting at the Royal College of Physicians of London on June 30th, 1894, and agreed with almost all the delegates representing the various institutions affected by the scheme in strongly advocating the appointment of a statutory commission at an early date. And there the matter stopped. It is clear that a statutory commission might be either a purely ministerial one, and would then only deal with the scheme as it stands, or one invested with wider powers, and these might be so large as even to reopen the whole question. Considerable difference of opinion exists among the various bodies interested as to what the extent of these powers should be, and we shall wait with some anxiety to see if Lord ROSEBERY gives any clue as to his own views on this material point. If these are forthcoming for the meeting of Convocation in the afternoon they will undoubtedly greatly affect the attitude of Convocation towards Dr. SYLVANUS THOMPSON'S first resolution, which reads thus: "That Convocation is of opinion that there should be one University in London and not two; and that the interests of higher education will be best served by such an enlargement and reconstruction of the existing University as will (while retaining its existing powers and privileges and without interfering with the efficient discharge of its present duties as an examining body for students from all parts of the British Empire) enable it to promote learning, scholarship, and research as a Teaching University for London." But the scheme of the Royal Commissioners involves such a reconstitution of the present University of London that its existing powers and privileges must be largely destroyed should their recommendations be acted on by a statutory commission; whereas if full latitude is given by Parliament to such a commission a very different scheme might be the outcome of its deliberations and decisions.

MISS L. B. ALDRICH-BLAKE, M.B., B.S. Lond., has been appointed anæsthetist to the Royal Free Hospital by the weekly board of that institution, in succession to Dr. Silk, who has resigned.

Annotations.

"Ne quid nimis."

INQUESTS WITHOUT MEDICAL WITNESSES.

AN example of the injudicious practice of dispensing with medical evidence at inquests has just occurred at West Hartlepool. The inquiry was as to the cause of the totally unexpected and painfully sudden death of a gentleman in a club. Having risen from his chair in order to get a newspaper, he, without any warning, fell heavily on the floor, whereby his right cheek was very severely cut and bruised. The other members rendered what assistance they could, and a medical man who was summoned arrived in a few minutes; death had, however, already resulted. An inquest was held on the following day, at which it would seem that the only witnesses called were the deceased's brother-in-law, and two members of the club who witnessed the event. According to the *Northern Guardian* the jury asked if it was necessary to have the medical attendant's evidence, to which the coroner replied, "Certainly not, unless you want to spend the ratepayers' money." The jury thereupon returned a verdict of "Death from natural causes." The proceedings appear to have been of an altogether formal character, and to have contributed nothing towards that explanation of the cause of death which is the chief aim and object of an inquest. Of course, there was in this case a complete absence of foul play, but the anxiety of many coroners to dispense with the expression of medical opinion at their inquiries, except under the pressure of obvious necessity, distinctly tends to diminish the value of an inquest as an institution designed for the information and protection of the public. In THE LANCET of Nov. 24th, 1894, mention is made of an inquest on the body of an epileptic in which the principal witness seems to have been a police constable, who deposed that death was due to epilepsy. As the body of the deceased had been found lying face downwards on some manure it is clear that suffocation during a fit was at least a more probable cause of death than epilepsy itself. Inquests conducted in such a fashion obviously can serve no useful purpose, and are not likely to secure either the confidence or the respect of the general public.

GROCERS' LICENCES.

MR. DAVID A. THOMAS is about to again introduce a Bill into Parliament for the abolition of grocers' licences. This has reopened, notably in the columns of the *Times*, the vexed question involved by the sale of intoxicants at grocers' shops. From the first THE LANCET pointed out that the sale of wines, spirits, &c., by grocers would encourage, facilitate, and sometimes even engender secret drinking. Mr. John Hilton, of the Alliance London Office, quotes our report of July 7th, 1877, when, in answer to questions we had addressed to the medical profession on the subject, 917 physicians and surgeons signed a statement declaring their "strong persuasion that the facilities for obtaining spirits, wines, stout, and ale in bottles provided by the grocers' licences have a most injurious tendency," and that "women, servants, and children of respectable households who could not or would not procure intoxicating drinks at public-houses are encouraged to purchase and use these liquors by the opportunity offered when visiting the grocer's shop for other purposes." To these well-known facts Mr. John Hilton, in his letter to the *Times*, adds a new and hopeful feature to the controversy. It appears that grocers licences are not so profitable as they were naturally expected to be. Indeed in some cases they have been the cause of

absolute failure. If so, the chief obstacle to their abolition will disappear. One grocer is mentioned as being ruined after he took out a wine and spirit licence. His customers contracted drunken habits, opened quarterly accounts, which they often failed to pay, while his shop assistants drank his wine and neglected their work. Another shop with two large windows—one devoted to groceries, the other to wine and spirits—had ruined two successive proprietors. A third purchaser presented himself, but only on the condition that the liquor was removed. This was done, though thought to be an act of madness; but the result has been the creation of a prosperous and profitable business. At a third grocer's shop, where the liquor traffic had also been abandoned, the net profits had considerably increased. It would seem that among customers who buy liquors with their groceries the proportion of bad debts is much higher. If this experience is confirmed in other quarters a great step towards the abolishing of grocers' licences will have been taken. Such questions should be settled purely on moral grounds; but if it so happens that the material interests of the trade will not be as disadvantageously affected as was generally imagined, we shall be all the better pleased. We have no reason and no desire to attack the interests of the grocery trade, but it is our duty to denounce all that encourages or facilitates alcoholism and thus endangers public health.

GEORGE RAINEY.

ALL St. Thomas's men whose recollection of the hospital extends back for fifteen or twenty years preserve kindly memories of Mr. George Rainey, the veteran demonstrator of anatomy. Unconventional in exterior, he was largely endowed with sterling qualities of head and heart, acknowledged even by the light-hearted young men who learned from him to trace out and understand the intricacies of their "parts." Most teachers know how arduous a duty is the unrelaxing effort to awaken and sustain a student's interest in his work, and to lead him to an intelligent comprehension and recollection of it, especially in a field so wide and so full of details as anatomy. Rainey's success in this direction was recognised by all who came in contact with him, including the dignified seniors who uphold the high position of St. Thomas's Hospital among schools of medicine. In addition to his work as an instructor Rainey carried out much original investigation. THE LANCET in 1851 contained an elaborate and thoughtful paper[1] written by him on the adjustment of vision effected by the ciliary processes and the pecten. Many other original memoirs by him appeared in the Annual Reports of St. Thomas's Hospital, the Transactions of the Royal Medical and Chirurgical Society, the Transactions of the Royal Society, &c. His first important paper was on a botanical subject—the Ascent and Descent of the Sap. It was read before the Royal Society in 1842 and appeared in book form with some additions in 1847. Botany and physics were combined in an investigation on the Formation of Starch Granules, the results of which were read before the British Association in 1859. In conjunction with his duties as demonstrator of anatomy he held a position as a practical microscopist which was at that time almost unique. Fifty years ago the microscope was in the hands of trained specialists only, and was far from being reckoned, as it now is, one of the ordinary accessories of a medical education. Rainey was an adept in microscopical manipulation and demonstration as then practised. Transparent injections were not at that time in use, but his specimens of tissues injected with opaque materials were a marvel to his contemporaries, and are valuable even now. By means of them he discovered the nature of those structures in the synovial fringes which have been called "Rainey's bodies," and which are now known to be the starting point of loose cartilages in joints. The *Quarterly Journal of Microscopical Science* and the Transactions of the Microscopical Society contain papers by him on the Cutaneous Follicles of the Toad and on Methods of Illumination in Microscope Work. His laborious life was prolonged far beyond the usual term. Born in 1801 in Spilsby, Lincolnshire, he came to London in 1824, and became a student at St. Thomas's Hospital. In 1827 he qualified as M.R.C.S., and obtained great success as a private teacher of anatomy. His tutorial connexion with St. Thomas's Hospital commenced about 1844, and continued for about forty years, being terminated only by his death in November, 1884, in the eighty-fourth year of his age. For this sketch of his career of active usefulness we are indebted mainly to an appreciative article contributed to the St. Thomas's Hospital Reports by his friend Mr. Wagstaffe, late senior assistant surgeon and lecturer on anatomy at the hospital.

[1] THE LANCET, July 26th, 1851. On the Function performed by the Ciliary Processes and by the Pecten in the Adjustment of the Eye to Distinct Vision at Different Distances.

PRESENTATION TO LORD SANDHURST.

THE important services rendered by the Right Hon. Lord Sandhurst to the Middlesex Hospital as chairman of the weekly board for the last six years have been gracefully acknowledged by his colleagues in the governing body, in conjunction with the medical staff and the resident officials. His lordship, who has been appointed Governor of Bombay, necessarily vacates his official position at the hospital, and was on the 12th inst. presented with an address together with a bowl and four goblets in silver. An influential gathering of the subscribers to the testimonial assembled to meet his lordship, the presentation being made by Mr. J. Bell Sedgwick, deputy-chairman of the board, supported by Mr. J. W. Hulke, President of the Royal College of Surgeons of England and senior surgeon of the hospital. Mr. Sedgwick delivered a very complimentary speech, to which Lord Sandhurst replied in appropriate terms, assuring the company of the regret with which he retired from his congenial duties at the hospital.

INFANT NEGLECT, INSURANCE, AND MORTALITY.

THE more closely we examine the practice of child insurance the less there appears to commend it. Notwithstanding the fact that disease is much more prevalent during the early years of life than later, it by no means follows that death is an equally certain factor in the table of probabilities. Well tended, well nourished, and within reach of prompt and skilful medical service qualified by no exorbitant fee, the prospects of infant life even among the poor, if they be careful also, are hopeful in a high degree. Life, not death, is the natural outlook, and the necessity for insurance is proportionately less. The social status of so young a child, moreover, as a rule is absolutely trivial. Compensation for its death argues a loss which is incalculably small. We cannot, therefore, find in such reasons as these facts afford any real justification of the system of insurance. Nor is the position of those who would advocate this system greatly improved when we pass to the question of ways and means as connected with the event of an infant's death. Simple in the extreme are all the needful arrangements for a funeral. Their cost would not overtax the slender means of almost any family which is maintained by honest work and thrift, so that even from this point of view insurance has somewhat the aspect of a superfluity. It is to be noted also that very many of those parents who pay their weekly contributions in token of their prudent fears are at the same time distinguished by a neglect of their offspring and a self-indulgence which are not less than criminal. Among 4629

children subjected to cruel treatment during the past month it is reported by the organ of the National Society for their protection that 1237 were known to be insured. So, too, was an unfortunate infant whose death was recently investigated by the coroner for the West Middlesex district. The parent could not afford medical aid (which he might have had for a mere pittance), but he did not neglect to pay his insurance premiums. Facts like these tend to sicken the public conscience. They strongly suggest a necessity for drastic reforms in a system of somewhat doubtful and limited advantage. Among such reforms we should, for our own part, insist upon two at least—namely, that the sum insured should no more than discharge the bare cost of funeral arrangements, and that evidence of such criminal neglect or mismanagement as might account for a child's death should disqualify for the receipt of the sum insured. Medical practitioners have a special duty in this connexion, and ought to be scrupulous in refusing to grant the customary death certificates in cases where they believe that such mismanagement has occurred.

CONSERVANCY AND WATER CARRIAGE SYSTEMS FOR THE REMOVAL OF EXCREMENT.

DR. BOOBBYER has presented to the health committee of the town council of Nottingham a valuable contribution to the literature bearing on the important subject of excrement disposal in large urban centres. The report is primarily intended to aid the committee in considering their future attitude towards the existing pail system in the borough; but it seems to be suited to the necessities of many towns where a like system obtains and where the sanitary authority are desirous of securing for their town competent advice given as the result of knowledge of the methods in vogue in a wide variety of places and circumstances. Dr. Boobbyer's report covers a wide area, being based on information obtained from seventy-eight towns (including the "great towns") of Great Britain and Ireland, a comprehensive tabular statement making his deductions all the more useful. Briefly stated, there is a general discontent with the conservancy system—the midden privy, pail closet, cesspool, and so on—only four towns openly advocating it—namely, Darwen, Hull, Warrington, and Rochdale—the latter for many years famous for the "system" to which it has given its name; but the opinion of these towns is far outweighed by the general condemnation resulting from experience in the other towns where the air, soil, and water-polluting conservancy methods find tolerance. One interesting fact given is that the nightsoil from the 40,000 pail closets and the 500 privies in Nottingham amounts annually to 500 tons, these figures permitting of an estimate for other places in like circumstances. Replies from forty-two large towns were strongly in favour of waterclosets both for in-door and out-door use; but the question of frost is not overlooked in regard to the latter use of waterclosets, though the damage so caused seems to be less than is popularly supposed. Dr. Boobbyer treats also of slop-water and trough closets, in favour of which Dr. Parsons has already some time back reported to the Medical Department of the Local Government Board, although the advantages of these forms of closet are not without some counter drawbacks, choking and difficulty of cleansing being among the latter. But, again, slop-water closets admit of being readily converted into waterclosets. At any rate, twenty-three towns look upon these forms of excrement removal very favourably, extended adoption leading to more pronounced views in their behalf, the tipping basin being the most generally adopted form of flush, and a three-gallon flush being regarded as a desirable minimum. One important point touched upon is that several towns offer a subsidy in aid of the conversion of dry to water carriage systems, Stafford proposing to offer as much as £3 in regard to each obsolete closet so converted. There is satisfaction in learning that in only three towns is the objectionable cesspool in wide use; but what is of very serious moment is the fact elicited that no fewer than fifteen of the larger towns—excluding London—with an aggregate population of some 2,750,000 inhabitants, discharge the bulk of their sewage in a practically crude state into inland waterways. Truly the Rivers Pollution Prevention Acts have been anything but that which their name implies, in so far as only too many of our populous towns are concerned. The matter calls for the earnest attention of county and parish councils and for the formation and sustained action of joint committees for the suppression of the pollution of our rivers. For the rest, Dr. Boobbyer shows the superiority of the watercloset for general indoor use and the desirability of automatic slop- or waste-water closets in poorer neighbourhoods and for outside use, though these latter, equally with trough closets (which, by the way, are liable to injury by frost), call for supervision by a staff of men attached to the Health Department. Trough closets, however, require a special (clean) water-supply, unlike the slop closet, which is self-feeding from the liquid waste of houses. We commend Dr. Boobbyer's report to all sanitary bodies interested in the question of excrement disposal. It is written in a lucid style and contains valuable standing matter for reference in its tables and summary.

THE NATURE AND TREATMENT OF LEPROSY.

AN interesting article on the above subject appears in the *American Journal of the Medical Sciences*, by Dr. R. H. L. Bibb, who has examined thirty cases of tuberculous and five cases of macular leprosy with reference to the presence of bacilli, and has never failed to find them in sections of tubercles, in blood drawn directly therefrom, in discharges from leprous ulcers, and occasionally in the sputum and the secretions from the nose; but he has never found them in the fæces, urine, or blood, except when the latter was taken directly from a tubercle, although other investigators—Köbner, according to Thoma and Cantlie—claim to have found them in the blood current. After referring at some length to the opinions of different writers as regards the nature of the bacillus and the question of heredity and mode of spread of the disease, Dr. Bibb discusses the treatment of leprosy. He has during the past ten years employed a great many drugs in treating a great many lepers; and while he has seen some truly marvellous results—results he was in nowise prepared to witness—follow the use of certain measures, he is not prepared to assert positively that he has brought about a radical cure of a single case of leprosy in either of its stages. Preparations of arsenic, mercury, and iodine when the disease was not associated with syphilis—it is often thus associated—he has found to be worse than useless; but he has seen very marked improvement in all three stages of leprosy follow the systematic use of Chaulmoogra oil internally and locally (associated with an improved dietary and personal hygiene), and this in a sufficient number of cases to induce the belief that while in no sense a specific, as regarded by Bergé, if commenced early in the disease and continued long enough and unintermittingly and associated with proper food and hygiene, it will cure the patient in many instances. Of course, there are many cases it will not benefit, probably a large majority, but Dr. Bibb has never seen it properly used without notable improvement ensuing, especially in the tuberculous stage. He has seen tubercles absorbed, anæsthesia removed, eruptions disappear, ulcers heal, pains quieted, suppleness and elasticity of the skin restored, and hope take the place of despair under its use. He begins treatment with ten drops of the

oil in gelatine capsules after each meal, to be taken with a glass of milk, the quantity to be gradually increased until from one to two drachms of the oil are taken daily, but few patients can take as much as two drachms daily without suffering from diarrhœa. At the same time the patient is bathed every second day with warm water and soap, and the oil is warmed and well rubbed into the skin over the entire body, including the ulcers and maculæ.

THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

IN view of the constant requests we receive for advice as to difficulties under the Infectious Disease (Notification) Act—and the number of cases where difficulties have arisen has become considerable and shows no sign of abatement—we have prepared a statement embodying the decisions and published opinions of the Local Government Board on this subject, a first instalment of which will be found on p. 171 of our present issue.

DEATH UNDER NITROUS OXIDE GAS DUE TO TIGHT-LACING.

MORE than one fatality from tight-lacing has recently been noticed in our columns. In all conditions in which free respiration becomes a necessity if the vital processes are to be carried on tight-lacing means death. Of all states that in which a patient takes an anæsthetic is the one when absolute freedom of breathing is a necessity. Unhappily, but few know this elementary fact in physiology, and hence the sad death of a girl who had taken nitrous oxide gas at a dentist's rooms, and while recovering from its influence had a fatal attack of syncope. The statement is made that her stays were five inches too small for her natural body, a disparity of shape which we imagine the dentist might have seen and acted upon before he ventured to give the unfortunate girl nitrous oxide gas.

THE METROPOLITAN WATER SUPPLY DURING DECEMBER, 1894.

DR. FRANKLAND, in his December report on the condition of the London water supplies, states that on Dec. 10th the Thames at Hampton was turbid and pale yellow in colour, but otherwise it was chemically in excellent condition. Bacterially the same water was of very inferior quality. As delivered by the five companies drawing their supplies from the Thames the water was in every case efficiently filtered, though owing to the previous impounding of flood water it was, on the whole, less pure organically than the untreated river water passing the intakes at the time the samples were taken for analysis. The bacterial improvements effected by the various Thames companies ranged from 99·21 per cent. in the case of the Grand Junction to 99·96 in the case of the West Middlesex. The water as delivered both by the New River and the East London companies was efficiently filtered, but it was slightly inferior to the unfiltered water in respect of organic purity. The bacterial improvement averaged 99·39 per cent.

THE DIFFUSION OF SMALL-POX.

IN London there was a slight increase in the number of small-pox attacks last week, these being 11, whilst 8 were admitted to the institutions of the Metropolitan Asylums Board, leaving 23 patients under treatment. Birmingham was free from fatal cases last week, but experienced fresh attacks to nearly a score, 13 cases being admitted to hospital, leaving 67 therein at the close of the week, some neighbouring districts also having suffered invasion. There were 3 registered deaths in Liverpool, where small-pox has shown a slight disposition to increase, some score of attacks occurring, and the adjacent borough of Bootle would seem to have had cases also last week, several being reported towards the close. In Edinburgh there were 15 registered deaths last month, with a serious recrudescence of the disease, which was fatal to the extent of 3·4 per cent. of the total mortality. Glasgow has during the present month had experience of the malady, but prompt removal of the patients to hospital has, it is hoped, stayed the disease. Dublin, after a heavy fall in the number of admissions to hospital from 113 to 32 in the concluding fortnight of December, had again an alarming increase in the first week of this month, no less than 71 admissions being chronicled, with 16 deaths. Of the 5 registered deaths 2 of adults were in vaccinated persons, and the remaining 3 in young persons all unvaccinated, aged respectively five weeks and twelve and sixteen years. The close of the week found 170 patients under treatment, exclusive of 121 convalescents.

DR. THOMAS GORDON HAKE.

THE connexion between medicine and letters—a connexion which an abstract of an interesting paper[1] by Mr. Simeon Snell printed in our columns recently showed to be not so rare as is generally supposed—was not much exemplified in the work of the late Dr. Thomas Gordon Hake, the poet, for, roughly speaking, Dr. Hake never practised at all, and, unlike Dr. Oliver Wendell Holmes, he made no use of his medical knowledge in his beautiful and imaginative verse. Dr. Hake was a personal friend of the late Dante Gabriel Rossetti and Mr. Algernon Charles Swinburne, and for these reasons, if no other, will always be classed in the popular mind as a pre-Raphaelite; but he took no active part in the promulgation of the tenets of that remarkable band of successful revolutionaries. Yet the titles alone of some of his poems, "The Serpent Play: a Divine Pastoral," and "Maiden Ecstasy," for example, show that he derived his inspiration from similar sources. Dr. Hake was considerably older than Rossetti, having reached the age of eighty-six when he died on Friday last (Jan. 11th), and was in enjoyment of a Civil List pension in recognition of his merit as a poet.

HOSPITALS AND PORT DUES IN THE EAST.

THE Chamber of Commerce of Liverpool has petitioned the Foreign Office for British shipping to be relieved of the hospital dues paid at the ports of Constantinople and Smyrna. It appears that Her Majesty's Consul-General at Constantinople levies dues on British ships at the rate of about one-third of a penny for every registered ton, so as to defray the cost of the British Seamen's Hospital in that city. This brings in about £5000 a year, but the hospital does not cost more than £3000 annually; consequently, since 1888 a surplus of about £14,000 has accumulated. At Smyrna the hospital tax is equal to 1¼*d.* per ton, bringing in an average of £1414, and the Smyrna hospital costs an annual average of £1079, so it is reckoned that a surplus of £1900 is in hand, thus making, for the two ports in the space of five years, a saving of £16,000. Under these circumstances, and considering the very severe competition from which British shipping interests suffer, it is urged that the hospital dues actually levied in these two ports should be reduced or abolished. In this matter we have at present before us only one side of the question. We are very pleased indeed to hear that so large a reserve fund has been accumulated. This speaks well for the management of these hospitals, and it suggests that there is some useful scheme to which these sums will be ultimately applied. Galata is one of the most unhealthy quarters of Constantinople, and we know that at Smyrna it is proposed to remove the

[1] THE LANCET, Dec. 8th and 15th, 1894.

hospital to a healthier position outside the town. Undoubtedly, when we consider how totally devoid both Constantinople and Smyrna are of anything approaching to a drainage system and proper sanitation, it becomes more than ever necessary to carry patients out into the open and away from the foul emanations of undrained Eastern towns. Of course, there should be near to the port a small ambulance or receiving hospital for emergencies, accidents, and perhaps for the convenience of out-patients; but the majority of the cases undergoing anything like a lengthy treatment would derive great benefit from the purer air outside the town. The Turks themselves have given us an example in this respect by building their vast Hasseki hospital for Mahomedan women on a distant height well away from the crowded quarters of Stamboul. Of course, we are fully conscious of the advantage of relieving British shipping from unnecessary burdens; but we imagine that the improvement of the hospital accommodation in such insanitary towns as Constantinople and Smyrna is not an unnecessary expenditure.

THE LEPROSY FUND PRIZE ESSAYS.

WE are glad to hear that no fewer than ten essays have been received in response to the questions on subjects connected with leprosy which were advertised in the columns of THE LANCET about a year ago. The number of questions proposed was ten, and they chiefly concern the prevalence of leprosy and its supposed causes in different parts of the world. Three of the subjects have elicited no reports, whilst one, the causes of the decline and extinction of leprosy in Britain, has produced three. The adjudicators are Sir Joseph Fayrer, Sir Guyer Hunter, and Mr. Hutchinson; and we believe that their decision will be announced very shortly. It is intended that the selected essays shall be immediately published, so far as the funds at the disposal of the committee will meet the cost. The adjudicators express themselves as highly gratified at the success which has attended this attempt at obtaining information. Many, indeed almost all, of the essays are, we understand, of great merit.

RAILWAY ACCIDENTS AND AMBULANCE ARRANGEMENTS.

THE Chelford disaster presents the almost unique spectacle of a railway accident arising from causes which did not imply neglect or mismanagement on the part of any individual. This fact, at least, in connexion with it is satisfactory. As much cannot be said with regard to some other associated circumstances. It is certainly remarkable, and not very creditable either to the prudence or the practical energy of mankind, that we have for more than half a century been in possession of a railway system, and are only now feeling our way to the formation of an ambulance department for service in emergencies like that above mentioned. And yet when the project is looked into there does not appear to be any real difficulty in the way of its realisation. Every station on every line could at no great cost of money, time, or trouble be provided with the means of coping with the sudden and urgent necessities arising out of an accident. Local practitioners might be confidently relied upon to render aid in such a case, and railway employés everywhere ought certainly to be so trained as to be of service as first aids to the injured. Such measures would avail as a temporary stopgap. A few ambulance waggons—equipped after the manner described by us in a recent issue,[1] as already illustrated on the Austrian lines of rail—could be despatched from headquarters with the breakdown train. Thus every necessity might be met promptly and effectually, life and health might be preserved, and much suffering obviated. As a mere commercial investment the suggested reform is not without some value, since medical aid thus early rendered might go far to prevent some of those consequences of accident which from time to time bring together passengers and railway companies in courts of law.

[1] THE LANCET, Nov. 24th, 1894.

DIPHTHERIA IN LONDON.

FATAL diphtheria in London last week again showed decline after the serious increase of the preceding week, 34 deaths being registered, against 36, 35, and 50 in the three previous weeks. The average was exceeded by 4 only, but the admissions were 74 cases to hospital, against 80, 75, and 64 in previous weeks; and last Saturday found 517 patients still under treatment. Of the 34 deaths, 70 per cent. were in children aged from one to five years; and 4 belonged to Lambeth, 3 each to Bethnal-green and Mile-end Old Town, and 2 each to Fulham, St. Pancras, Shoreditch, Limehouse, Poplar, Newington, Camberwell, and Greenwich. In Greater London there were 13 deaths registered from diphtheria, including 9 in West Ham.

THE EPILEPTIC COLONY AT CHALFONT.

THE executive committee of the National Society for the Employment of Epileptics have just issued their first report. The aims of the society and the successful working of the colony that has been established at Chalfont in Buckinghamshire[1] have been several times referred to in the columns of THE LANCET. The land acquired by the society is sufficiently extensive for a settlement of several hundred epileptics, but the necessary building operations absorb a large amount of capital, and we learn with much regret that the funds in the hands of the society will be almost exhausted by the cost of erection of the first permanent building for eighteen men, leaving women and children, whose requirements are equally pressing, quite unprovided for. It is to be hoped that the next report will be able to announce a generous response on the part of the public, so that the society may be able to extend its usefulness. The movement has the cordial approval of the medical profession, as expressed by its leading members and by the medical press, and the names of the members of the executive committee and of the honorary medical staff are sufficient guarantee that subscriptions and donations entrusted to the society will be employed wisely and efficiently for the relief of the unhappy class of sufferers for whose benefit it has been instituted.

THE CALIBRE OF THE HUMAN INTESTINE.

IN communicating to the Société de Chirurgie the results of some experiments he had carried out on dogs with Murphy's anastomosis button, M. Chaput made a statement[2] which seems to us to open up a field for speculation, if not for inquiry. Basing his opinion on numerous measurements of the human intestines, the distinguished French surgeon informed his audience that the 27 millimetre button is far too bulky for the small gut in general, and especially for the lower end of the ileum. Of the three sizes he prefers that which is about equal to 21 millimetres in diameter; it is the smallest and adapts itself to the situation more readily than the others. Now the questions suggested by M. Chaput's remarks are these: Do American citizens, as a rule, possess more voluminous intestinal tracts than their French congeners, and, if so, how far is cookery responsible for the difference? It is, of course, notorious that French cooking is the best in the world: has this fact any bearing upon the presumably small calibre of the French bowel? Digestion being made easy, so to speak, is it the case that a partial

[1] THE LANCET, Nov. 17th, 1894.

[2] Gazette Hebdomadaire des Sciences Médicales de Bordeaux, No. 47, Nov. 25th, 1894.

arrest of development has been the consequence? Is there also discrepancy as regards length between the *primæ viæ* of the two nationalities? Savages are endowed with magnificent mouth furniture, and dental decay is sometimes said to be a product of civilisation dependent to a great extent upon knives and forks! Has the human race any reason to dread analogous deterioration as a corollary to elaborate cookery? Finally, and by way of closure to these *obiter dicta*, are dainty dishes a physiological mistake?

THE ILLNESS OF THE DUKE OF ARGYLL.

THE Duke of Argyll was seized by sudden illness while addressing a large and most enthusiastic meeting in St. Andrew's Hall, the largest hall in Glasgow, on Wednesday evening last. Some months ago the Duke's promised visit had to be postponed on account of illness, and on Wednesday night when he stepped on to the platform his appearance was that of a man who was barely convalescent. With admirable pluck, however, the Duke persisted in an endeavour to redeem his pledge, but unfortunately the task was beyond his power. The magnificent reception given him by the audience seemed to stimulate him, and his speech at first went well, but after speaking about a quarter of an hour his face became deadly pale, and he sank back unconscious into the arms of his friend Lord Kelvin. He was at once removed to an anteroom, and attended by Professor McCall Anderson, who had been on the platform, and by Drs. S. Sloan and G. R. Mather. His Grace's condition was one of most profound syncope; the pulse had almost disappeared, and difficulty was experienced in keeping up warmth in the limbs. After an hour or two of rest he was carefully removed, in the recumbent posture, to the house of Lord Kelvin, at the College, where he now lies, surrounded by friends, and in a part of the city where the requisite quiet and freedom from disturbance can be obtained. According to latest advices the Duke spent a somewhat restless night on Wednesday, but was conscious, and in other respects is reported to be progressing well. The attack of syncope was of a very profound nature, but now that he has rallied he is free from the severe epigastric pain which he had complained of before his seizure, though some abdominal tenderness remains. His illness was no doubt partly a manifestation of dyspepsia of a gouty character, though it must not be lost sight of that the Duke of Argyll is no longer a young man to whom journeys and the excitements attendant upon political affray can be considered unimportant.

"PITHECANTHROPUS": THE MISSING LINK (?).

AT the meeting of the Paris Society of Anthropology held on the 3rd inst. M. Manouvrier gave an account of the discovery by M. Eugene Dubois, surgeon in the Dutch Army at Batavia, of a cranium and femur with characters partly pithecoid, partly anthropoid. The remains were found in the lower quaternary strata in Sumatra, and M. Dubois has published a very complete monograph upon them. The cranium of "pithecanthropus" is described as being intermediate in character between the anthropoid apes and the aboriginal Australian. It exhibits an exaggeration of the Neanderthal skull, with its enormous superciliary eminences. The cranial capacity is much greater than that of the largest gorilla, but it is less than in primitive man, and does not exceed that of advanced imbecility. A molar tooth that was found near the skull more resembles in its great size that of a monkey than of a man. The position of the occipital foramen shows that this was seated upon the vertebral column more directly than in any anthropoid ape. It most approximates to the gibbon, but the differences between the human skull and that of the gibbon are greater than between this specimen and that of man. The femur, which was the only other part of the skeleton found (although as the site of this bone was at some distance from the cranium it may not belong to the same individual), shows that the pithecanthropus could walk erect. The femur, indeed, approximated more to the human type than the cranium. In the course of the discussion M. Duval remarked that the communication was perhaps the most important that had ever been made to the society, and thought the Netherlands Government should be asked to have casts made for presentation to the museum. He considered that the more markedly human type of the femur than of the cranium suggested that the pithecanthropus had learnt to walk in human fashion before it had developed human intelligence.

NURSING IN RURAL DISTRICTS.

MUCH has to be endured by the poor inhabitants of country villages and isolated cottages when sickness has made its appearance in the humble home. Under such circumstances the neighbours generally render willing aid to those members of the family who have to attend upon the patients, and amateur advice prompted by good intentions is abundantly forthcoming. The advantages which would follow if a better system of nursing could be introduced have long been apparent, and about five years ago some benevolent ladies of position inaugurated the Rural Nursing Association founded for the purpose of supplying this want. The council of the Queen's Jubilee Institute, recognising the usefulness of the project, affiliated the new association to their own society, and there is already a great demand for the services of their nurses, who receive their training in London and other large towns. The expense of qualifying the probationers for this charitable work is considerable, and the association's need of funds for carrying on the scheme has found expression in a letter written from St. Katherine's Royal Hospital, Regent's-park, W., and inserted in the *Times* of the 5th inst. Country practitioners will fully recognise the utility of this movement, which will directly benefit the patients and ultimately tend to improve the quality of domestic nursing.

LORD RANDOLPH CHURCHILL.

LORD RANDOLPH CHURCHILL'S condition during the last few days has been generally marked by an increase of cardiac weakness, with tendency to coma, interrupted by such occasional intervals of rallying and return to consciousness as are common in the advanced stage of general paralysis.

AFTER the dinner of the staff of St. Thomas's Hospital on the 12th inst. Dr. Ord expressed the sympathy of his colleagues with Dr. Cullingworth in the recent vexatious action unsuccessfully brought against him by a patient and presented him with a cheque for the sum which they had individually and collectively subscribed as a token of their appreciation of his conduct as a physician and regard for him as a colleague. Dr. Cullingworth, who gracefully replied, thanked those present for the unexpected expression of their kindness to him, and assured them that the knowledge of their support was a great help to him during the worries of the trial.

AN urgent appeal for public help is about to be made on behalf of St. Thomas's Hospital by the President, H.R.H. the Duke of Connaught and Strathearn.

WE understand that the Duke of Cambridge, President of the German Hospital, will take the chair at the fiftieth anniversary dinner to be held in April.

DIFFICULTIES UNDER THE INFECTIOUS DISEASE (NOTIFICATION) ACT.

I.

WE are so frequently asked to advise correspondents as to difficulties which have been met with under the system of compulsory notification inaugurated by the passing of the Infectious Disease (Notification) Act, 1889, that we think it well to collect together in one set of articles the principal points as to which doubt and difficulty have arisen, and to place on record the various decisions and official interpretations which have been given with regard to them. Some of these have already been referred to at intervals in the columns of THE LANCET in answer to correspondents; others, again, have not been published in any form which is available for the purposes either of the medical practitioner or of the medical officer of health; and as regards both there will be advantage in putting them together in a form that will admit of easy reference. In doing so we would at the outset observe that, except when otherwise stated, all our comments apply to proceedings under the general Act of 1889, and not to the special Acts and codes of regulations under Provisional Orders which came into operation before 1889.

1. *Duties of the Medical Officer of Health under the Act.*

We refer here to the question whether the duties of the medical officer of health have in any way become changed in consequence of the passing of the Infectious Disease (Notification) Act of 1889. This question often arises in consequence of complaints made by local authorities to the effect that medical officers of health have failed to visit houses where infectious disease has occurred, although they have received notification to that effect. On this point the answer is perfectly clear. The Notification Act does not add to the duties which medical officers of health were required to perform before the passing of that Act. Those duties were defined under an Order of the Local Government Board, and they were not altered when the Act was passed. Whatever duty attached to a medical officer of health on receiving information as to the occurrence of infectious disease in his district antecedent to the passing of the Act still holds good; but no new duty has been assigned to him in this respect. The character of his work and the performance of any special duties remain the same; the only change that has taken place is that under the system of compulsory notification he hears of many more occurrences of infectious disease than he formerly did, and in this way duties which have always devolved upon him have undergone considerable increase. This is a point that deserves serious consideration in connexion with the revision of salaries; but when the question is asked whether a medical officer of health is bound to visit every case of infectious disease, simply because he now receives his information through the agency of a compulsory instead of a voluntary system, the answer is "Certainly not." Just as formerly, the responsibility of paying a personal visit in consequence of information received, or of not paying such a visit, devolves on him and on no one else. He alone is the judge as to the necessity or not of such a visit, and he alone will bear the responsibility of any failure to estimate aright the import of the information he receives, whether by the aid of a notification certificate or otherwise. The difference following the adoption of the system of notification is that if a certain percentage of attacks—whether 10 per cent. or 50 per cent.—calls for a personal visit the large increase in the number of cases heard of under the notification system necessarily results in this percentage being calculated on a much greater number of cases than formerly. When, therefore, local authorities ask a medical officer of health to undertake to visit every case of notified infectious disease they make a demand upon him which is altogether beyond his duties as officially laid down. It is for the performance of those specified duties that the salary of a medical officer is paid; and if he ties himself in advance to the performance of additional ones it is to those alone who have pressed this further duty upon him that he can look for a corresponding increase in his remuneration.

Writing on this point to the chairman of the Milford urban sanitary authority on Nov. 23rd, 1889, the Local Government Board stated as follows: "The Infectious Disease (Notification) Act, 1889, where adopted, confers no new powers upon the medical officer of health, but is designed to afford him such immediate information of the outbreak of infectious disease as will enable him promptly to take such measures as are prescribed by the instructions (see Art. 18 (6) of the Order of March 8th, 1880) and authorised by the existing law (see Section 120 of the Public Health Act, 1875)."

Again, on Aug. 8th, 1890, the Local Government Board addressed a letter to the medical officer of health of South Molton to the following effect: "I am to state that the Infectious Disease (Notification) Act, 1889, does not impose fresh duties on a medical officer of health, but merely increases the sources of information upon which he acts in the discharge of his existing duty in relation to infectious disease. When that duty is determined, as in the South Molton urban sanitary district, by the Board's Order of March 8th, 1880, the medical officer of health has to take the steps indicated in Article 18 (6)—viz.: where the information points to an 'outbreak of any contagious, infectious, or epidemic disease of a dangerous character,' to 'visit the spot without delay and inquire into the causes and circumstances of such outbreak,' and to take such further action as may be necessary within his powers." [We may here state that the words quoted in this letter remain unaltered in the last issue of the Order in question.]

By some this has been interpreted to imply that each notified case of infectious disease is to be regarded as "an outbreak" of a contagious, infectious, or epidemic disease of a dangerous character, and that a visit from the medical officer of health is in consequence requisite. But the letter in no way implies that knowledge of disease under the Act as to notification calls for different action from knowledge acquired antecedently to, or otherwise than under the Act. Indeed, it is obvious that many cases of notified disease call for no visit whatever on the part of the medical officer of health. When, for example, scarlet fever is prevalent in a district, and when the medical officer of health has already visited the locality and arranged with the local medical practitioners and the sanitary inspector as to all measures of disinfection &c., it would be waste of time for him to pay a visit when each further case is reported, especially when the report comes from a medical practitioner who adds to his information that the case is well housed and isolated, and that all due precautions are being taken. The utmost that could be wanted in such a case would be a visit from the sanitary inspector with regard to the supply or use of disinfectants and the control of school attendances.

Indeed, where an effort has been made by sanitary authorities to define "an outbreak" under the Order as including all cases of infectious disease coming to the notice of a medical officer of health, the Local Government Board have declined to accept such interpretation, and they have explained that the responsibility for regarding one and another occurrence of infectious disease as constituting "an outbreak ..... of a dangerous character" rests, not with the local authority, but with the medical officer of health. Even before the passing of the Act as to compulsory notification this attitude was adopted. Thus, writing as to this question in the case of the East Molesey urban sanitary district as far back as Feb. 22nd, 1884, the Local

Government Board stated: "With respect to the interpretation to be placed on the words 'outbreak of any contagious, infectious, or epidemic disease of a dangerous character' for the purposes (of the Section in question) I am to state that the Board are in the habit of holding the medical officer of health responsible for the judgment which he forms on the question whether any case or cases of contagious, infectious, or epidemic disease constitute an outbreak for the purposes of this Section, and have thought it undesirable to lay down minute rules in the matter."

Whilst, therefore, we should advise the medical officer of health to err on the side of paying unnecessary visits, rather than in omitting visits where there is any doubt as to their necessity, yet it should be remembered that no fresh duty as to such visits devolves on him because of the adoption of the Act as to notification, and that since he alone has to bear the responsibility for the results of any failure to pay a personal visit it is for him, and him alone, to decide whether the information he has received, whether as the result of notification or otherwise, brings the occurrence within the scope of the section of the Order which requires him to pay that visit. The section defines the object of the visit. It is that the medical officer of health shall inquire into the causes and circumstances of the occurrence with a view to advising whether, and what, measures are required to prevent the extension of the disease. It is for him to judge how far a personal visit by himself is in each case necessary to secure those ends, or how far those ends can be secured without a personal visit to the locality.

THE HOUSING OF THE POOR AT BUDAPEST.

WHAT THE INTERNATIONAL CONGRESS OF HYGIENE AND DEMOGRAPHY DID NOT SEE.

(FROM OUR SPECIAL CORRESPONDENT.)

No. II.[1]

To the description of the unwholesome dwellings I was able to visit at Budapest I would now add some quotations from official documents. These are of double importance: first, they give a fuller conception of the state of things that has been allowed to prevail; and, secondly, they prove that the authorities cannot plead ignorance of these grievances. So far back as the summer of 1883 Dr. Nemenyi, member of the Budapest town council, raised the question, and a committee was appointed to inquire into the cause of the scarcity of dwellings, and an official report was issued entitled "Yelentés a Budapesti lakás ugy targyában, 1883." Among other significant details given in this report I find that at that time 27·37 per cent. of the habitations in Budapest had no kitchens; thus in these places cooking and washing were done in the living and sleeping room. Ten years later Dr. Gustav Thirrnig, Vice-Director of the Statistical Office, published another report on overcrowding. In this report it is stated that the number of inhabited rooms and cabinets without windows is so large that they cannot be considered as exceptions. Even stables are used as dwellings, and thirty-seven stables were found to be overcrowded by human beings. Nor were they inhabited only by stablemen, but by market gardeners, labourers, porters, and even domestic servants. Then fifteen poor labourers were discovered sleeping in the engine-house of the Royal Hungarian State Railway. In the riding school of the Franz Josef Barracks the tailor of a regiment, his family of eight, and two assistants were located. In the Soroksár-road eleven gardeners lived in wooden huts meant to be used as places for storing refuse. In the Jaszbereing-road there were several tent dwellings, some containing as many as twenty labourers. In the kiln of a brick factory twenty-four men and four women lived together. In Steinbruch nineteen holes and natural caves in the rocks were discovered not only to be inhabited but overcrowded by 182 persons. In the open fields by the outer Jaszbereing-road and in the woods of Bächerwald people were sleeping. A whole family of labourers had made their home in a ditch at Bakosfalva, while a family of five persons was living in a railway waggon at Pulverthurmried. Altogether I find that 2000 persons are described as living in places defined in the official statistics as "non-dwellings." On p. 890 are the following remarks: "The lodgings are in general damp, dark, and unhealthy. In some of them there are not even ten cubic metres of space per tenant. Indeed, in some tenements there are only seven or six, and here and there only two or three cubic metres of air per head. One-third of the inhabitants in these overcrowded tenements have no beds to sleep upon, and must content themselves with some other kind of resting-place or must sleep on the floor. Of those who have beds only one-tenth have beds all to themselves; the others are forced to sleep two, three, and even more than three persons in one bed."

Nor are the workers in factories, who have something like regular employment, much better off. In a pamphlet published in 1891 by Dr. Emanuel Somogyi, entitled "Die Lage der Arbeiter in Ungarn," the writer says: "That the wretchedness of the dwellings causes the economical and moral ruin of workmen's families cannot be disputed. This question has often been dwelt upon by writers on economics. Social statisticians have frequently given objective descriptions of circumstances concerning such dwellings of the working classes that would make the readers shudder, and such scenes are unveiled as would frighten even a novel writer of the naturalist school." At Budapest thirty-one factory owners have built dwellings for their workpeople, which they let out at weekly rents, and here the workers obtain cheaper lodgings. One hundred and thirty other establishments give their workpeople lodgings *gratis*, or rather include the rent in their wages. The number of workmen thus lodged was estimated at a little over 6,000. In these rent-free lodgings the most distressing overcrowding prevails. There are 120 rooms filled by people who for the most part are occupied as brick-makers. In each room three or four families are huddled together without regard to the numbers composing each family. The unmarried workmen sleep in sheds. In the distilleries sleeping-halls are erected; straw or mattresses are spread out on the floor. There is no indication that the bedding is ever washed, nor is there any ventilation provided. The official inspector of manufactories remarks in his report of the year 1887, p. 61, that "the people had an existence unworthy of men."

What is perhaps even more disheartening than all these details is the fact that so far as the overcrowding is concerned there is no improvement. On the contrary, matters are becoming worse and worse. According to the official figures there were in 1880 as many as 43,815 persons living at Budapest in dwellings where four or more persons inhabited a single room; but in 1890 the number of persons thus overcrowded is set down as 64,106. Nor is this merely due to the general increase of population. Ten years ago the proportion of persons living four and more in one room was equal to 12 per cent. of the entire population, while to-day the proportion is equal to 13·2 per cent. One improvement has, however, been accomplished: the number of cellar dwellings has decreased. Ten years ago there were 5217 underground tenements with 31,137 inhabitants, while in 1890 there were 4641 such cellar dwellings with 26,143 inhabitants.

The prevalence of cholera at Budapest in 1893 cannot have surprised the authorities. The documents from which I have made the above quotations were familiar to the administrators of the town. These terrible statistics were again brought forward at the International Congress of Hygiene and Demography by Dr. Josef Schwartz in the remarkable paper to which I have already alluded, and I was naturally anxious to see what had been done. I found that the municipality, under the stress of the cholera scare, had built on the outskirts of the town some wooden barracks which, though at first intended as cholera hospitals, are now used as cheap lodgings to relieve the overcrowding of the central portions of Budapest. I visited one of these wooden cholera isolation barracks. They consist of wooden pavilions. With the exception of the caretakers, the tenants are driven out during the daytime. The first pavilion I entered is inhabited by twenty-four women and several children. Another one has sixty occupants. The scarcity of furniture was very apparent. There are no

[1] The first part was published in THE LANCET of Jan. 5th, 1895.

chairs and no separate beds. The tenants must lie down, side by side, on bench beds which hold twelve or more persons. On these broad planks there are small, narrow mattresses and some blankets. At the foot of the bench beds there is a long board, which serves as an immovable seat. Then there is a rough wooden table, which has to be carried up to the seats. This and a little shelf above the beds are the only accommodation given. There is no sanitary convenience whatsoever within these dormitories, and it is necessary for the inmates to go out in the open. Outside there are closets, which consist simply of a board placed over a huge open cesspool. There is no pan, trough, or pail, but in each closet a partition some twenty inches high prevents those who enter from walking into the cesspool, and also serves as a sort of seat. This aperture, subdivided into closets, is some six yards long and perhaps half a yard wide, and below are the fæcal matter and urine of some 400 people. There is absolutely nothing else. No water, no sand, no ashes, nothing to reduce the odour, to dilute the foul matter, and absolutely no covering to prevent the emanations reaching the outer air. The stench is, therefore, perceptible at a great distance. There are altogether six pavilions inhabited by 436 persons, each paying about a penny per day for the privilege of sleeping here. Though this charge is small, the municipality is realising a large profit on the undertaking. There are no sewers and no drains here. The slop water is simply thrown on to the bare earth, and it either sinks into the subsoil or flows into a neighbouring field where there is much stagnant water. Close by the wooden pavilions there are small cottages which have rooms let to married couples for 1·50 fl. per week. The maximum number of inhabitants in one room was two parents and six children. The room measured 3·70 by 4·21 metres and was 3 metres high. In these cottages there was a general aspect of squalor. No attempt seems to have been made to inculcate principles of hygiene; and when I was attempting to resist the nauseating effects of the open cesspool, which is only emptied three times a year, and treading slop-sodden earth in front of these wretched municipal dwellings, I could not help thinking of the model common lodging-house built in Parker-street by the London County Council. If municipal intervention cannot produce anything better than the penny plank beds provided by the Budapest municipality in its wooden cholera barracks the less of such intervention the better. The very sight of this place, especially the open cesspool and the absence of drains, is enough to convince anyone that the Budapest authorities have not yet any idea of what their duties should be in respect of the housing of the poor. How can the municipality, as the sanitary authority, call upon landlords to build sanitary dwellings, to lay proper drains, and to trap, flush, and ventilate every soil and waste-water pipe if that authority itself lodges on its own premises several hundred poor people without providing them with any of these sanitary requisites! The one great use of a municipal lodging-house or municipal tenement is that they should serve as an example to private owners and thus raise the standard all round. This is what the tenement cottages of the Huddersfield municipality, what the common lodging-houses of the Glasgow municipality, have already accomplished, and this good example is now being followed by the London County Council. The municipality of Budapest, by building and letting out as habitations wooden pavilions where there is no decent separation of beds, no chamber utensils, no semblance of comfort, no drainage, and no sanitary closets, is setting, not a good, but a very bad example.

In conclusion, a few words are necessary concerning the increase of population in Budapest and the vital statistics of that town, for these very clearly demonstrate the life-wasting results of the inefficient housing of the poor. At the beginning of this century, when there were already 55,000 inhabitants at Berlin, 300,000 at Naples, and 720,000 at Paris, Pest was but a small district with a population scarcely exceeding 2000. In 1870, shortly after the recognition of Hungarian autonomy, there were 70,000 inhabitants at Buda and 200,476 at Pest. In 1891 there were 92,465 inhabitants at Buda and 399,772 at Pest, and 14,147 soldiers. It is calculated that from 1801 to 1891 the proportion of augmentation of population has been equal per annum and per 1000 to 37·7 in London, 38·1 in Paris, 53·9 in Vienna, 70·7 in Glasgow, and 90·7 in Budapest. The birth rate at Budapest, though still very high, has decreased considerably. Towards 1870 it was about 44 or 45 per 1000, and it is now 35 or 36 per 1000. The great increase of population is due to migration into the town rather than to the birth-rate. This has a very important bearing on the death-rate, for the people who come to Budapest in search of work are in the prime of life. They increase the total of the population, but decrease the proportion of deaths. In Hungary young persons under fifteen years constitute 37·48 per cent. of the rural population and 32·99 per cent. of the population in the towns, but at Budapest they only amount to 26·11 per cent. of the population; therefore the death-rate ought to be very low, as so small a proportion of the population are of the age when most deaths occur. Actually the deaths of children under five years are equal to 44 or 45 per cent. of the total deaths; but the insanitary conditions tell on the adults also; for, whereas the proportion of persons who die between the ages of fifteen and forty years amounts in 100 deaths to 39·92 among the rural population and to 40·47 in the towns, it is equal to 50·73 per cent. at Budapest. Nevertheless, the death-rate of Budapest has shown some signs of improvement during the last ten years, though it is difficult to say how far this is due to the greater influx of adult immigrants and to the reduction in the birth-rate. In any case the death-rate is still very high. The average for the last ten years would exceed 30 per 1000 per annum, and if, in respect to age, the population of Budapest was like that of most other towns the death-rate would be much higher still. Thus the vital statistics confirm all that has been said as to the insanitary state of the town. These unwholesome conditions, resulting in this great and preventable loss of human life, are in the main caused by the overcrowding and unsuitable dwellings. A good Building Act and a stringent law against overcrowding, with a well-organised staff of inspectors to enforce the same, are most urgently needed at Budapest. Till reforms of this description are energetically carried out, Budapest, in spite of its beautiful buildings, palaces, squares, and broad thoroughfares, will remain but a whited sepulchre.

BRITISH MEDICAL BENEVOLENT FUND.

THE annual general meeting of subscribers to the Britis Medical Benevolent Fund was held at 84, Brook-street, Grosvenor-square, W., the residence of the treasurer, at 4 P.M. on Thursday, Jan. 10th. The chair was taken by Dr. C. J. Hare, in the absence of the President, Sir James Paget, Bart., F.R.S. Amongst those present besides the officials were: Drs. Holman, Baines, Lowe, Brett, Milson, Eastes, and Sidney Phillips; and Messrs. Mould, Roche, Lynch, Kiallmark, Morgan, Parker, Young, and Churchill. Before proceeding to business the subscribers present desired the secretary to convey to the President an expression of their sympathy with him in the loss of Lady Paget, and regret for the sad reason of his inability to preside as usual.

The treasurer's financial statement and the report of the committee were presented by the honorary financial secretary, Dr. Samuel West, who had succeeded Dr. Sidney Phillips in the course of the year, and from them it appeared that, in the grant or immediate relief department, the receipts had been as follows: subscriptions, £1083 14*s.* 5*d.*; donations, £707 8*s.* 4*d.*—together, £1791 2*s.* 9*d.*; while £1759 had been expended in grants to 169 applicants. At the close of the year there were 104 annuitants of £20 each, absorbing £2053, and the income from investments to meet these annuities had been £1938 11*s.* 3*d.* Two legacies had been received—one of £100 from the estate of the late Mr. E. Newton, F.R.C.S., formerly a member of the committee; and one of £500 from that of the late Mr. T. Madden Stone, but the latter had been received too late for inclusion in the balance sheet. The expenses, including the collection and distribution of £3812, the printing, postage, and stationery, the collector's commission, and sundry incidental expenses, had amounted to £161 13*s.* 10*d.* The report of the committee mentioned the objects of the society and the various methods of applying the funds at disposal; and while they felt able to speak well of the annuity department they were persuaded there was room for a great deal of improvement in the contributions given for grants, which were wholly inadequate to meet the requirements of applicants; so much so that it had been necessary to use the whole of the large donations, instead of investing one-half according to the usual custom.

The committee were re-elected, and to fill the vacancies in the number Mr. Howard Marsh, Mr. John Tweedy, and Dr. Wm. Travers were elected. Messrs. Mould, Bartrum, Hodgson, John Terry, and Henry Terry were elected vice-presidents.

A feature of the fund is the selection of gentlemen as local secretaries, whose functions are to collect subscriptions in their locality, to advocate the claims of the charity generally, and to assist the committee by investigating claims upon the spot and administering the relief granted when it can be more beneficially done than by the usual method of monthly instalments through the Cheque Bank. The services of three gentlemen, Mr. G. F. Hodgson of Brighton, Mr. Bartrum of Bath, and Dr. Cooper Rose of Hampstead, all old and valued friends of the fund, have been lost by resignation, and in the two former instances successors have been appointed. The work done by all these gentlemen is worthy of the highest praise, and it is earnestly hoped that others in various parts of the kingdom will be found willing to undertake similar duties, and so add materially to the utility of the charity.

The usual votes of thanks were proffered to the chairman of committees, the treasurer, and secretaries, and the auditors, and the customary honorarium to the hon. secs. for clerical assistance was recommended. The medical press was duly thanked for the invaluable assistance invariably rendered, and the proceedings terminated with a cordial vote of thanks to the chairman.

The utility of the fund, its quiet unobtrusive help, and the excellence of its methods of applying assistance after careful investigation were eloquently insisted upon by the Chairman, Dr. Hare, in returning thanks, and he most warmly advocated the claims of the charity upon the profession.

Subscriptions and donations are urgently needed, and will be gladly received and thankfully acknowledged by any of the officers of the fund, especially the treasurer and secretaries, and particularly by the hon. financial secretary, Dr. Samuel West.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A QUARTERLY MEETING of the Council was held on the 10th inst., the President, Mr. J. W. Hulke, F.R.S., being in the chair.

Mr. Edmund Owen was readmitted as a member of the Court of Examiners, and Mr. William Anderson and Mr. Herbert W. Page were introduced and made declarations in the terms of the oath prescribed by the Charter of 1800 on their admission as members of the Court of Examiners.

A resolution was adopted congratulating Sir John Eric Erichsen, past President of the College, on his receiving the honour of baronetcy.

The recommendation from the Committee of Management that University College, Nottingham, be added to the list of recognised places of instruction in chemistry, physics, practical chemistry, and biology was adopted.

The formulæ for the alteration of Sections 4, 16, and 25 of the by-laws were approved and ordained by the Council, and the solicitor of the College was instructed to take the necessary steps for submitting the formulæ to the Secretary of State for Home Affairs for sanction and ratification.

The President reported the proceedings at the half-yearly meeting of Fellows on the 4th inst., and stated that there were fifty Fellows present, including fifteen members of Council. The resolution passed at that meeting, requesting the Council to appoint a conjoint committee of members of the Council and other Fellows to consider the desirability of obtaining a new Charter, together with the details thereof, was read, but the full consideration of the resolution was deferred to a subsequent meeting.

Mr. Bryant, on behalf of himself and Sir James Paget, reported the presentation to the College, by Mr. William Hunter Baillie, of portraits of John Hunter and William Hunter, John Hunter's clock, and two volumes of autographs. The autographs contained in these volumes are of great interest and very valuable. The Council passed a resolution thanking the donor for his gift.

A letter was read from the honorary secretaries to the annual meeting of the British Medical Association, to be held in London from July 30th to Aug. 2nd, 1895, and it was decided that a conversazione should be given by the College to the Association.

The next meeting of the Council is to be held on Feb. 7th, as the Hunterian Oration is to be delivered on the 14th of that month.

MATTEI REMEDIES IN COURT.

ON Wednesday, at the Worksop (Notts) County-court, his Honour Judge Masterman, M.A., D.C.L., had before him a number of cases which should not be without some interest to the medical profession generally.

Mrs. Blakeley, agent for Count Mattei, and who lives at what is known as the "Mattei Depôt," Greenlea, Newcastle-avenue, Worksop, sought to recover payment from a number of her customers. The sums claimed were small, ranging from a few shillings to a little over £2 each, and were for "Mattei remedies" supplied. The claims had previously been, in the ordinary course, before the Registrar (Mr. J. Snow Whall), who, not feeling justified in making the desired orders, referred the whole of the cases to his Honour. There were about a dozen defendants altogether, and nearly all of them answered to their names when the cases were called on. The plaintiff, Mrs. Blakeley, did not appear in person, but was represented by a young woman named Nellie Pinder, who was examined by the judge. In reply to his Honour she said the medicine in the bottles did not come from Italy already made up, but was made up by the plaintiff at Worksop. His Honour: Is it poisonous? No, sir.—Is there no poison in it? No, sir.—Have you got the prescription? Yes, sir; it is Dr. Johnson's prescription. The witness handed up the prescription, from which his Honour read the formula Ac. 31, p. 1, which the girl said applied to Count Mattei's drugs. His Honour remarked that he could not tell from this whether there was poison in the medicine or not. But surely the law did not allow unlicensed persons to go about dispensing medicine of this sort without knowing what was in it—it was a dangerous thing if it did. The defendants—mostly women—were then called up before his Honour, and many of them made voluntary statements. One said the plaintiff promised to cure her husband in three weeks, but he had never been able to do anything since, and he had been at home fifteen weeks. Then, she added, the plaintiff sent the same medicine for all complaints. Six pills were 2*s.* 6*d.*, and they were put into a bottle of water.—His Honour: I do not see that it has done much harm. All the defendants said it had done no good, and one said she was worse after she took the medicine. Still another brought up a bottle containing a transparent colourless fluid, which she said was some of the medicine, but it was "nothing but water." His Honour: You will have to pay if it is. Another brought some of the pills enclosed in the stamped wrapper, and another said there were two bottles of the medicine, "one for night and the other for morning." His Honour took possession of two bottles and said he would have the contents analysed by the Public Analyst. If they contained poison the defendants would not have to pay, but if they did not judgment must be given against them. Meanwhile, he adjourned the cases for a month. At Wednesday's court, when the cases should have again come on, it transpired that they had all been withdrawn by the plaintiff, but one of the defendants attended to claim his expenses. The application was opposed by Mr. W. A. Charles of Retford, solicitor, who now appeared for the plaintiff and gave as his grounds for opposing the application that the plaintiff brought the actions in ignorance, but upon being advised saw that she was wrong entirely. Further, she had already lost the entry fees, and she gave notice to the defendants of the discontinuance of the proceedings. He admitted that the plaintiff had no cause of action.—His Honour: Then you must pay the defendants for coming. The costs of the applicant were accordingly allowed. His Honour then stated that the report of the county analyst stated that he failed to find anything in the bottle except tap water, and he was satisfied that there was *no appreciable medicinally active ingredient present*. His Honour added that it must be remembered that it was not proved on oath before him that the bottles contained the medicine; they were simply handed to him by one of the defendants.

THE HEALTH OF THE NAVY IN 1893.

A COPY of the Statistical Report of the Health of the Navy for 1893, presented to the Lords Commissioners of the Admiralty by the Director-General of the Navy, and ordered to be printed by the House of Commons, is before us. It first of all deals with the health statistics of the total force, and this is followed by the statistics of the home station and the various foreign stations at which the different squadrons of Her Majesty's fleet are employed, and the irregular force, with an appendix of tables &c. The various sections dealing with the fleet at commands and stations abroad are illustrated by many useful small maps. The naval health reports differ from those of the army and the various medical reports of the Sanitary Commissioner with the Government of India in that the former are entirely statistical, the letterpress simply setting forth the results embodied in the tables, with very brief references to the assigned causes of the diseases and mortality. It follows that these naval health reports mainly consist of facts and figures which, from their nature and from the fact that they relate to a past year, are somewhat dry reading, and present little scope for commentary, criticism, or speculation. There are no papers of professional, geographical, or topographical importance or interest to be discussed.

The total force in the service afloat in 1893 was 60,120 officers and men, of whom 56·45 per cent were between the ages of fifteen and twenty-five, and 30·65 per cent. between the ages of twenty-five and thirty-five; only 1·54 per cent. were above forty-five years of age. We learn that the returns of the total force for 1893 are of a satisfactory nature. The entire number of cases of disease and injury give a ratio of 954·42 per 1000 of the mean force, which, with the exception of the preceding two years, when the ratios were slightly less, is the lowest recorded since 1856, when the publication of the present system of statistical reports commenced. Owing to the disastrous loss of the *Victoria*, when 358 deaths by drowning occurred, the death-rate is high. The number of deaths in 1893 was 679, which gives a ratio of 11·20 per 1000, an increase of 5·71 per 1000 in comparison with 1892 and of 4·69 on the average of the last six years. There is an increase in the ratio per 1000 of cases of constitutional syphilis in 1893 in comparison with that of the last six years; indeed, the report tells us that at certain stations the cases of secondary forms of the disease numerically exceed those of the primary—a matter of rare occurrence. The lowest sick-rate was on the South-East Coast of America station and the highest on the China station. The ratio per 1000 of men sick daily on the home station was 41·41; Mediterranean, 37·26; North American and West Indian, 30·66; South-East Coast of America, 27·94; Pacific, 48·38; West Coast of Africa and Cape of Good Hope, 38·58; East Indies, 47·21; China, 52·01; Australia, 36·85; and in the irregular force, 46·46. The average ratio of sickness for the total force was 41·32 per 1000, which is a decrease of 0·37 when compared with the preceding year. The ratio of invaliding for disease was 25·38 per 1000 and for injury 1·66 per 1000, the total invaliding rate for disease and injury being 27·04 per 1000.

There were 190 entries for enteric fever in 1893, of which 62 were on the home station; the remainder were mainly on the Mediterranean and North American and West Indian stations, and other stations abroad. The entire number of deaths from this disease was 37, and the invalidings 20. A solitary instance of yellow fever, which was fatal, occurs in the records of the South-East Coast of America station. Only 7 cases of small-pox are recorded.

Among the causes of inefficiency in the fleet venereal diseases occupy as usual, and seemingly as a matter of course, a very high place. There were 9321 cases; 3106 being of primary syphilis, 1593 of secondary syphilis, and 4622 of gonorrhœa and its sequelæ. The number invalided for these diseases was 198, and there were 5 deaths. The loss to the nation from the number of naval seamen and from the loss of time during which they remain incapacitated for duty, to say nothing of the immediate and remote consequences of this class of disease, is a matter for serious consideration. The subject is confessedly a very difficult one to deal with, and in the present state of political feeling with regard to it there does not seem to be much chance of doing so effectively. But the increasing prevalence of these diseases in the Services, and especially in the army in India, must sooner or later force itself upon the attention of our legislators.

SANITARY DISTRICTS AND REGISTRATION AREAS.

MEDICAL officers of health and others interested in the construction of health and mortality statistics have long had reason to deplore the want of uniformity and the constant overlapping between the boundaries of sanitary districts and of registration areas. There is ground for much satisfaction in the fact that the Local Government Act of 1894 has removed the main difficulty which stood in the way of more general uniformity in the boundaries of these two classes of areas, without which the construction of thoroughly trustworthy vital statistics for sanitary districts is rendered exceedingly difficult, if not impossible. For many local reasons it is obviously desirable that the subdistrict, which is the unit of registration areas, with a resident registrar, should include one or more entire civil parishes. Urban districts, however, until recently, included in many, if not in most, cases parts of civil parishes, and, therefore, registration subdistricts were in very few cases entirely situated within one sanitary district. By the operation, however, of the Local Government Act of 1894 every parish partly situated in two sanitary districts necessarily become two separate parishes. It is, therefore, now possible, as vacancies occur in the office of registrar of births and deaths for the various subdistricts, so to vary the grouping of the parishes as very materially to simplify the construction of vital statistics and to consolidate the registration arrangements for many of the towns which have hitherto suffered much inconvenience from these overlapping boundaries. To take only one town as an example: the Lancashire municipal borough of Middleton, with a population of little more than 20,000, was until recently partly situated in the three Poor-law unions of Oldham, Bury, and Prestwich; and in order to ascertain the death-rate within the borough it has been necessary to obtain, from no less than five registrars, returns relating to parts only of their respective subdistricts. The residents of this borough, moreover, have had to ascertain which of these five registrars it would be necessary for them to visit in order to register births and deaths. It may be hoped that in the near future it will be possible very considerably to simplify these arrangements. It is, however, unfortunately the fact that Poor-law guardians frequently attach more weight to the value of the patronage which they exercise in appointing the local registrars of births and deaths, in case of vacancies, than to the question of simplification of boundaries or the facilities for the construction of vital statistics. It appears that there is at present a vacancy in the office of registrar for one of the suburban subdistricts of Bolton, which includes a small part of the county borough and a few rural parishes. The Registrar-General, with a view to simplify boundaries and to carry out the spirit of the Local Government Act of 1894, proposes to add the part of this subdistrict which is within the borough to another subdistrict which is entirely within the borough, in order eventually to consolidate the whole borough in two subdistricts, instead of, as at present, small parts of the borough being situated in three outlying subdistricts. The Bolton guardians have, however, memorialised the Local Government Board to withhold their sanction to the simplification of boundaries proposed by the Registrar-General. It is, however, to be hoped and expected that the Local Government Board, which fortunately has Sir Walter Foster, M.D., for its Parliamentary Secretary, will recognise the importance of encouraging, rather than checking, the gradual process of introducing greater uniformity between sanitary districts and registration areas. It is not easy to over-estimate the importance of simplifying the construction of trustworthy mortality statistics for urban and rural sanitary districts in connexion with general health progress.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

St. Pancras Urban Sanitary District.—The general and infantile mortality in the several subdistricts in St. Pancras is well shown in the accompanying table :—

Subdistrict.	Number of deaths.	Death-rate per 1000.	Infantile mortality.
Regent's-park	761	20·3	147·5
Tottenham-court...	577	21·8	199·7
Gray's-inn-lane	749	26·7	236·2
Somers-town...	829	24·7	213·0
Camden-town	352	24·5	170·5
Kentish-town	1896	19·7	150·4
St. Pancras	5163	21·8	176·0
London	91536	21·3	164·3

Dr. Sykes gives in his report a very interesting and concise account of an outbreak of scarlet fever which occurred in October, 1893, amongst the consumers of milk from a certain farm at Hendon. The milk in question was supplied to the customers by a milk vendor at Highgate, who obtained his milk from two sources other than the Hendon farm. It was possible, however, by a careful inquiry as to the distribution of the several supplies, to exonerate all but the Hendon milk from blame; and it appears that before Dr. Sykes's visit to the farm the county veterinary inspector had ordered the milk of five cows with sore teats to be withdrawn from the common supply, and the cows themselves to be isolated. The story which Dr. Sykes tells gives a good idea of the great difficulty and delay occasioned by having to procure a magistrate's order prior to inspecting the suspected dairies. Before being able to obtain an order to inspect the Hendon dairy Dr. Sykes called on no less than five magistrates in the district in which the dairy was situated, and he also experienced considerable delay before being able to legally enter the Highgate dairy. It seems that antecedently to the outbreak there had been at the Hendon farm one, if not two, cases of scarlet fever among those having to do with the cows, so that in this instance there was apparently illness both of cows and milkman.

Dublin Urban Sanitary District.—The corrected general death-rate of Dublin for 1893 was 23·2 per 1000, a rate which, as Sir Charles Cameron points out, is 4·88 above the mean rate for the thirty-three large towns of England and Wales for the same period. The rate is, however, slightly below that of Manchester and Preston and considerably lower than that of Liverpool. The high death-rate of Dublin is attributed by Sir Charles Cameron chiefly to the poverty and environment of a large portion of the population; and in illustration of this point he observes that one-third of the population live in single room tenements, and that in 1893 no less than 33·2 per cent. of the total deaths in Dublin occurred in public institutions frequented by the poor, a percentage considerably in excess of that observed in London and other English towns. There were eleven deaths from typhus fever in Dublin during 1893, a disease which, Sir Charles Cameron remarks, was once very prevalent in that city. Diphtheria caused in the city a very small mortality, there being but 12 deaths. On the other hand, phthisis, a disease always prevalent in Dublin, caused a death-rate of 3·9 per 1000. The deaths, too, from typhoid fever were in excess of those during any previous year, prolonged drought and heat being, Sir Charles Cameron thinks, chiefly responsible for the excess. The report upon the prevalence of typhoid fever in Dublin, which was drawn up by a committee under the auspices of the Dublin Sanitary Association, is referred to at some length by Sir Charles Cameron. After pointing out that the death-rate from typhoid fever is higher in Dublin than in any other town in the United Kingdom save Belfast, the committee consider in detail the causes instrumental in maintaining this high rate. The disease seems to prevail not only in the city of Dublin itself, but also in the suburbs, although presumably many of those dying in the suburbs may have contracted the disease in the city. The Vartry water is practically exonerated by the committee, though they draw attention to the manner in which contamination of the water may occur in polluted cisterns. The committee, after considering all the usual methods of the spread of typhoid fever, were led to regard the contamination of the subsoil by polluted subsoil water as the chief agent in the origin and dissemination of the disease; they look, in fact, upon the polluted subsoil water as forming a suitable medium for the growth of typhoid bacilli, and they insist upon the importance of efficient subsoil drainage. In order to ascertain the levels and fluctuations of the subsoil water in several parts of the city wells were made and the levels observed. The result, in so far as the limited observations made went, was to show that the subsoil water was highest in the more elevated parts of the city and lowest in the low-lying portions near the river, this unexpected result being due, it appears, to the fact that the upper portions of the city are on clay and the lower on gravel. The fluctuations of the subsoil water in the trial wells varied from two inches and a half to three feet ten inches. It will be extremely interesting to observe the effect of the subsoil drainage, not only upon the prevalence of typhoid fever, but also upon that of phthisis. Whooping-cough and measles were added to the list of notifiable diseases in May, 1893, but in regard to the former disease Sir Charles Cameron observes that, the uselessness of its notification having been experimentally demonstrated, it has now been removed from the list.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 7072 births and 4901 deaths were registered during the week ending Jan. 12th. The annual rate of mortality in these towns, which had been 18·0 and 18·9 per 1000 in the preceding two weeks, further rose last week to 20·1. In London the rate was 19·3 per 1000, while it averaged 20·8 in the thirty-two provincial towns. The lowest rates in these towns were 14·6 in Derby, 16·8 in Bradford and in Croydon, 16·9 in Leicester, and 17·4 in Cardiff; the highest rates were 22·7 in Newcastle-upon-Tyne, 23·9 in Manchester, 24·1 in Blackburn, 25·7 in Huddersfield, and 28·9 in Liverpool. The 4091 deaths included 363 which were referred to the principal zymotic diseases, against 385 and 399 in the preceding two weeks; of these, 109 resulted from measles, 63 from whooping-cough, 66 from diphtheria, 45 from diarrhœa, 39 from "fever" (principally enteric), 33 from scarlet fever, and 3 from small-pox. No fatal case of any of these diseases occurred last week in Swansea or in Norwich; in the other towns they caused the lowest death-rates in Brighton, Leicester, Burnley, and Nottingham, and the highest rates in Manchester, Salford, Portsmouth, Wolverhampton, and Gateshead. The greatest mortality from measles occurred in Portsmouth, Derby, Halifax, Leeds, Sheffield, and Gateshead; from scarlet fever in Wolverhampton; from whooping-cough in Birkenhead, Huddersfield, and Sunderland; and from diarrhœa in Gateshead. The mortality from "fever" showed no marked excess in the other large towns. The 66 deaths from diphtheria included 34 in London, 6 in West Ham, and 3 each in Bristol, Wolverhampton, Birmingham, and Sheffield. Three fatal cases of small-pox were registered in Liverpool, but not one in London or in any other of the thirty-three great towns. There were 28 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 12th inst., against 15, 16, and 23 at the end of the preceding three weeks; 8 new cases were admitted during the week, against 1 and 8 in the preceding two weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1713, against 1931, 1890, and 1779 on the preceding three Saturdays; 130 new cases were admitted during the week, against 116 and 126 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had been 332 and 319 in the preceding two weeks, rose again last week to 389, but were as many as 454 below the corrected average. The causes of 82, or 2·0 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol,

Oldham, Leeds, and in seven other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Blackburn, Halifax, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·1 and 21·8 per 1000 in the preceding two weeks, rose again to 25·5 during the week ending Jan. 12th, but exceeded by 5·4 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 10·2 in Perth and 14·2 in Leith to 28·7 in Glasgow and 31·1 in Aberdeen. The 736 deaths in these towns included 58 which were referred to measles, 19 to whooping-cough, 14 to diphtheria, 11 to diarrhœa, 6 to scarlet fever, 3 to "fever," and 2 to small-pox. In all, 113 deaths resulted from these principal zymotic diseases, against 86 and 81 in the preceding two weeks. These 113 deaths were equal to an annual rate of 3·9 per 1000, which was 2·1 above the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had declined from 54 to 33 in the preceding three weeks, rose again to 58 last week, of which 28 occurred in Glasgow, 19 in Aberdeen, and 5 in Edinburgh. The deaths referred to whooping-cough, which had been 18 and 9 in the preceding two weeks, rose again to 19 last week, and included 15 in Glasgow. The fatal cases of diphtheria, which had been 10, 4, and 11 in the preceding three weeks, further increased to 14 last week, of which 7 occurred in Edinburgh, 3 in Glasgow, 2 in Dundee, and 2 in Leith. The 6 deaths from scarlet fever showed a slight decline from the numbers recorded in recent weeks, and included 3 in in Glasgow and 2 in Edinburgh. The 2 fatal cases of small-pox were registered in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 138 and 154 in the preceding two weeks, further rose to 215 last week, and exceeded by 58 the number in the corresponding week of last year. The causes of 50, or nearly 7 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·4 and 28·3 per 1000 in the preceding two weeks, further rose to 31·0 during the week ending Jan. 12th, a higher rate than in any week since the end of March last. During the thirteen weeks of last quarter the death-rate in the city averaged 23·5 per 1000, against 16·6 in London and 19·6 in Edinburgh. The 208 deaths registered in Dublin during the week under notice included 19 which were referred to the principal zymotic diseases, against numbers declining from 22 to 10 in the preceding three weeks; of these, 11 resulted from small-pox, 3 from "fever," 2 from scarlet fever, 2 from whooping-cough, 1 from diarrhœa, and not one either from measles or diphtheria. These 19 deaths were equal to an annual rate of 2·8 per 1000, the zymotic death-rate during the same period being 1·7 in London and 3·8 in Edinburgh. The fatal cases of small-pox, which had been 6, 10, and 5 in the preceding three weeks, rose again to 11 last week, a higher number than in any week during the present epidemic. The deaths referred to different forms of "fever," which had been 7, 3, and 2 in the preceding three weeks, were 3 last week. The 208 deaths registered in Dublin last week included 31 of infants under one year of age and 61 of persons aged upwards of sixty years; the deaths both of infants and of elderly persons exceeded the numbers recorded in recent weeks. Five inquest cases and 3 deaths from violence were registered; and 69, or nearly a third, of the deaths occurred in public institutions. The causes of 13, or more than 6 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

Surgeon-Lieutenant-Colonel John Hoysted retires on retired pay. Surgeon-Captain Edward D. Bringhurst-Farmar, F.R.C.S. Edin., to be Surgeon-Major.

INDIA AND THE INDIAN MEDICAL SERVICES.

The following appointments are announced:—5th Regiment, Madras Infantry: Surgeon-Major J. Scott, M.B., I.M.S., to the Medical Charge of the Regiment. 6th Regiment, Madras Infantry: Surgeon-Lieutenant P. C. Gabbett, I.M.S., to the Officiating Medical Charge of the Wing of the Regiment at Cuttack. 16th Regiment, Madras Infantry: Surgeon-Major E. R. DaCosta, I.M.S., to the Medical Charge of the Regiment. Surgeon-Major G. J. Kellie (Bengal), Medical Officer, 4th Lancers, to be Medical Officer of the 2nd Lancers, vice Brigade-Surgeon-Lieutenant-Colonel J. F. Sargent, who exchanges. Surgeon-Lieutenant-Colonel C. J. W. Meadows, Civil Surgeon of Murshidabad, is appointed to act as Civil Surgeon of Burdwan until further orders. Surgeon-Captain G. Jameson, Officiating Civil Surgeon of Rajshahi, is appointed to act as Civil Surgeon of Malada. Surgeon-Captain W. J. Buchanan is appointed, until further orders, to do general duty at the Presidency. Surgeon-Captain T. Grainger, Civil Surgeon of Khulna, is appointed to act as Civil Surgeon of Noakhali until further orders. Surgeon-Lieutenant Johnston has been transferred from general duty, Poona district, to general duty, Sind district. Surgeon-Colonel Robert Harvey, Inspector-General of Civil Hospitals in Bengal, has been granted eight months' leave to England. Surgeon-Colonel Raye will act as Inspector-General of Civil Hospitals in Bengal. Surgeon-Lieutenant-Colonel Patrick Murphy, M.D., retires from the Indian Medical Service.

MILITIA MEDICAL STAFF.

Surgeon-Lieutenant-Colonel T. W. S. Locke, 3rd Battalion, the Suffolk Regiment, is retired under the provisions of Paragraph 82 of the Militia Regulations 1894, with permission to retain his rank and to wear the prescribed uniform on his retirement.

VOLUNTEER CORPS.

Artillery: 1st Worcestershire and Warwickshire: John Henry Blakeney, Gent., to be Surgeon-Lieutenant. 1st Devonshire (Western Division, Royal Artillery): Lieutenant Arthur Lloyd MacLeroy is appointed Surgeon-Lieutenant. *Royal Engineers:* 2nd Cheshire (Railway): Surgeon-Major J. Atkinson to be Surgeon-Lieutenant-Colonel. *Rifle:* 3rd (Dumfries) Volunteer Battalion, the King's Own Scottish Borderers: Surgeon-Lieutenant P. M. Kerr, M.B., resigns his commission; Peter Murray Kerr, Gent., late Surgeon-Lieutenant, to be Lieutenant. 1st Surrey (South London): Surgeon-Lieutenant T. A. Dagg to be Surgeon-Captain. 2nd Volunteer Battalion, the King's (Shropshire Light Infantry): Surgeon-Captain R. de la P. Beresford to be Surgeon-Major. 2nd London: William Arthur Bond, Gent., to be Surgeon-Lieutenant.

THE LATE SURGEON ELRINGTON FRANCIS SIMEON MCKAY, R.N.

The *British Central Africa Gazette* relates the circumstances under which the late Mr. McKay, surgeon on board H.M.S. *Pioneer*, met with his death. It says: "It appears that Dr. McKay was left by H.M.S. *Pioneer* on Oct. 20th for a few days' shooting at a village near the south-west corner of Nyassa. Two days later he started with three boys to shoot elephants. After walking some hours they came to a pool of water, and seeing a lion and lioness a few yards distant Dr. McKay fired twice at the lion and wounded it. Both animals then made off for the jungle. Most of the native attendants then ran away or climbed trees, but the doctor and his Zanzibari boy, Mussa, went in search of the wounded lion. They espied the beast crouching down fifteen yards away, and the doctor fired at the lion's head. At that instant the lion sprang upon the doctor with a terrific roar, and a deadly struggle took place. Dr. McKay lost his rifle in endeavouring to keep the lion off his throat. The beast seized his left arm in its jaws, and clawed his right. Dr. McKay kicked at the lion, which threw him down and began to tear his flesh. Dr. McKay then called to Mussa, who brought the rifle, and Dr. McKay, unable to hold it up, made Mussa sit down, and the lion was shot. A rough stretcher was then made and Dr. McKay was carried into camp. He died on Oct. 26th. On the same day, a little later, H.M.S. *Pioneer* returned to find him dead. He was taken to the Universities Mission Station at Likoma and buried in the cemetery there."

BRIGADE-SURGEON-LIEUTENANT-COLONEL HOOPER.

The Lieutenant-Governor of the North-West Provinces of Bengal has taken the occasion of the departure from India of this officer, who was the civil surgeon of Lucknow and is now the President of the Medical Board of the India Office,

in succession to Sir Joseph Fayrer, to place on record his appreciation of the excellent and devoted services which Brigade-Surgeon-Lieutenant-Colonel Hooper has rendered to the Government of those provinces from June, 1861, up to the present time. After eleven years' good service in the Gaol Department as Superintendent of the Central Prisons of Allahabad and Benares he was in 1874 placed in medical charge of the important station and district of Benares. In August, 1891, as a reward for long and approved service, he was transferred to the civil surgeoncy of Lucknow, where he not only earned the approval of the Government, but gained the confidence and affection of all classes of the European and native communities. "In 1881 he received the thanks of his Excellency the Viceroy and Governor-General of India, and between 1878 and 1893, on eight separate occasions, those of the Government of these provinces for the working of the hospitals and other medical institutions under his charge, and throughout a long career he has well upheld the high character of the service to which he belongs."

THE WAZIRI EXPEDITION

Some of the military columns which have taken part in sweeping the enemy's country have had a very trying time owing to the severity of the weather in Afghanistan. At Jandola, which is at an altitude of some 7600 feet, there was much snow and a severe frost, but the health of the force was reported to be good. Much greater care seems to have been taken in the present expedition than on previous occasions of campaigning in that country in providing the troops—and the native army especially, the men of which suffer from cold and exposure more than those of the British army—with plenty of warm clothing.

INCINERATORS FOR INDIAN CANTONMENTS.

The military authorities have had under consideration the extension of the incinerating system in military cantonments of stations in the hills and plains of India, with the view of preventing the pollution of the subsoil and securing surface cleanliness. The main difficulty is the cost of the necessary fuel. The object in view is a very desirable one, for many medical officers and others are of opinion that the pollution of the subsoil is not improbably at the bottom of many of the outbreaks of enteric fever in our Indian stations.

The *Pioneer Mail* states that Surgeon-Colonel Cleghorn, Inspector-General of Civil Hospitals, Punjab, is on his way out to India, and that he will presumably be offered the post of Surgeon-General and Sanitary Commissioner with the Government of India, in succession to Surgeon-Major-General Rice, who will vacate that appointment on March 29th next.

A telegram to the *Times* through Reuter's Agency says: "The stations of Naini Tal and Murree have been selected as the headquarters of the new Bengal and Punjab armies formed under the army organisation scheme which comes into operation on April 1st next."

Correspondence.

"Audi alteram partem."

THE GENERAL MEDICAL COUNCIL AND THE OBSTETRICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—For many years the Obstetrical Society of London has laboured in the cause of the education and registration of midwives. Meanwhile, until this object be attained by legal means the society has, at great trouble, examined women who have passed through a certain training, and given certificates to the successful candidates. The council of the society, being anxious that its certificate should not in any way offend against the Medical Acts or the ethics of the profession, when drawing it up sought the help of a solicitor intimately acquainted with the Medical Acts. The certificate does not purport to be a legal qualification, and is as much like a legal qualification as the certificates of honour granted by the medical schools to successful students in their classes, or the diploma granted to the successful brewer in a beer exhibition. The certificate, in its present form, has been used by the society for many years without complaint of any kind having been made. During the last two years the society has received two notices from the General Medical Council pointing out to institutions granting such certificates that the certificate should be expressed in such a form as not to lead to the impression that it is a legal qualification to act as a medical practitioner; but no fault was found with the certificate of the Obstetrical Society. The society, in acknowledging the communication, mentioned the care which had been taken to draw up the certificate in accordance with the views expressed by the General Medical Council. No further communication took place between the two bodies until the society received the resolution of the General Medical Council of Dec. 3rd, 1894, and until then the Obstetrical Society was ignorant of any objection to its certificate on the part of the General Medical Council. I can hardly think that the Council can be fully aware of the full significance of its resolution, for should the society grant its certificate again the following persons will be regarded as guilty of infamous conduct by the General Medical Council—viz., all the past presidents of the society, its trustees, and other officers, most of the examiners in midwifery in the Universities of London, Oxford, and Cambridge, and the Royal Colleges of Physicians and Surgeons—in fact, all the obstetric physicians of note in London. These men, contingently branded with infamy, are well acquainted with the provisions of the Medical Acts, and many or all of them well versed in the ethics of the profession and punctilious in their observance, many of them having held high positions in the colleges and schools, and are held in honour by their professional brethren. None are better informed of the needs of the poor in their travail; none are better able to train and examine midwives; and from their learning, culture, and experience none are fitter to form correct views of what is and what is not professionally infamous. Yet these are the men who have for years been guilty of what is declared to be infamous conduct after Dec. 3rd, 1894, by the General Medical Council. Had the Council conferred with the President of the Obstetrical Society the two bodies could have easily come to an understanding on the matter (for the society has shown every desire that its certificate should be inoffensive) and avoided the ill-feeling which the resolution must inevitably cause.

I am, Sirs, yours faithfully,

JOHN WILLIAMS.

Brook-street, Grosvenor-square, W., Jan. 16th, 1895.

COLLES' LAW.

To the Editors of THE LANCET.

SIRS,—Dr. George Ogilvie has written in THE LANCET[1] on Colles' law a thorough study, in which, entering again upon the discussion about the right or wrong naming of that law, he utterly attacks the Continental writers who contested Colles' titles, and me particularly. The meaning of Colles' statement appeared to Dr. Ogilvie "to be quite clear and definite"; if it were so, no debate would have probably taken place on the point, but in any case Dr. Ogilvie does not seem to have a right to say that our heresy takes its rise from the ground that "some of Colles' statements have been either misconstrued or misrepresented." And, indeed, when he confesses himself that "it may be doubted whether Colles fully realised the theoretical bearing of his law" I dare say we may be allowed to state—finding his text unsufficiently clear and poorly definite—that, if Colles has forwarded a true assertion (which proves him to have been endowed with good clinical observation) he did not at all construe it. At least, nothing shows he understood so far clearly, since "not one of his cases is given to demonstrate his law," and avow the theoretical bearing of his law seems to fly very far away when he tells us how, in the case of a respectable mechanic and his wife, he noted that the servant girl received the infection from the infant, whilst the mother [who had about two years before been under his care on account of secondary venereal symptoms, of which he supposed her to have been cured] had not in a degree or in any way suffered from the disease of the child; she had not received any infection from her own child (!), yet the disease was capable of infecting the servant girl?[2] And, however, Colles had seen cases in which the mother remained free from venereal symptoms; but I say the above case shows

[1] Is Colles' Law a Misnomer? THE LANCET, Dec. 1st, 1894.
[2] See Colles, pp. 291, 292, 293.

that he wondered as much in both cases at the mother's immunity had that one been previously free from or afflicted with syphilitic symptoms. "Of these three different ways of stating Colles' law," says Dr. Ogilvie, "that which I designate No 1 is by far the most definite." Perhaps, had it not been slightly weakened by the case mentioned above, and, more, it is really peculiar that No. 1 precisely has not been quoted by Diday and M. Doyon, "the best advocates of Colles"; but where I can no more follow Dr. Ogilvie is when he does not hesitate to write: "I am not aware that it has been formulated in a better or more concise manner by any subsequent writer." On that point let the English readers be judges themselves:

COLLES' STATEMENT, No. 1.	BAUMÈS' STATEMENT.
I have never seen or heard of a single instance in which a syphilitic infant [although its mouth be ulcerated] suckled by its own mother had produced ulcerations of her breasts, whereas very few instances have occurred where a syphilitic infant had not infected a strange hired wet-nurse, and who had been previously in good health.	Observation shows that a mother, having borne in her breast a syphilitic child WHO DERIVES THE INFECTION FROM THE FATHER'S SPERMA, does not contract generally when suckling her own child the syphilitic complaint as could a strange hired wet-nurse contract it.
Colles, anno 1837.	Baumès, anno 1840. (Précis sur les Maladies Vénériennes, Lyon, page 180.)

I am bound to state, in my turn, that, with a philologist declaring he considers the two preceding statements as being equivalent, no more discussion is henceforth to take place. And so perfect is Baumès' statement that A. Fournier, contemporaneously formulating the same idea, uses almost the same terms: "A mother never receives syphilis from her infant, even while it has contagious ulcers, when this infant hereditarily derives syphilis from its father."[3] Besides, there is no cause to prolong the debate; certainly Colles did not catch the bearing of his observation, but he took notice of a clinical fact. He pointed it out, and therefore is worth giving his name, or half its name, to the medical law which we proposed to call Colles—Baumès' law. Moreover, let my honoured opposer be no more afraid. Use is our sovereign master; it has already consecrated the name of Colles' law, which will probably persist in spite of equity. Before concluding, let me state that I should not like to be charged with seriously looking upon a scientific contest from a national point of view. The matter which Dr. Ogilvie alluded to was a light jest that I was allowed to turn with my friends, the late Professor Diday and M. Doyon, *à propos* of Lyons and Paris schools' scientific rivalship; but I should not wish to be misrepresented as commonly using such ways of discussing. I hope, consequently, this debate will now come to its end, and I should not have answered Dr. Ogilvie's dissertation had not his criticisms been presented in such a paper as THE LANCET, which, being widely read, could, if not refuted, have given wrong ideas about Continental writers' erudition, ways of argumentation, and courteousness.

I am, Sirs, yours truly,

DR. A. MOREL LAVALLÉE,
Ex Chef de Clinique à l'Hôpital St. Louis.

Rue Taitbout, Paris, Dec. 25th, 1894.

[3] Union Médicale, March 16th, 1889, p. 412.

"CASE OF DOUBLE POPLITEAL ANEURYSM."

To the Editors of THE LANCET.

SIRS,—I feel honoured by your reference to my case of double popliteal aneurysm published in THE LANCET of the 5th inst. Your criticisms are quite just, but the importance of the points which they raise almost demand one or two observations from me. There can be little question as to the small extent of artery obliterated in cases which have been successfully treated by my method. The recorded experience of others, as well as my own, places this point beyond dispute. As to the obliteration of the artery from the groin down to the aneurysm in the limb treated by Carte's compression, I think it right to say that it may be that the compressor was kept applied too long after consolidation had taken place, thus giving rise to coagulation in the vessel and to its final occlusion upwards from the aneurysm. But as to the comparison of my plan with that of ligature, everyone knows that in the latter the artery is generally obliterated in at least two places—viz, at the point of the ligature and at the aneurysm—and also more or less above, below, and between these two points. Further, I hardly think that there can be any question that bad results sometimes ultimately come to the patient from this lengthened obliteration of the artery in ligature for popliteal aneurysm and consequent interference with the adequate nutrition of the limb. Such cases I have seen in which the ultimate results could not be accounted for in any other way. In other words, a patient may leave hospital with a cured popliteal aneurysm, but with the limb more or less disabled for the rest of his life. This, at all events, cannot be said of my case.

I am, Sirs, yours faithfully,

Jan. 14th, 1895. WALTER REID.

"THE ABSENCE OF SUGAR FROM NORMAL URINE PROVED BY A NEW AND SIMPLE METHOD."

To the Editors of THE LANCET.

SIRS,—Sir George Johnson has reopened the discussion of the question regarding the existence of sugar in healthy urine. He now brings forward other evidence in support of its alleged absence, but in doing so his position remains unchanged. He seeks to disprove a positive by means of a negative. Sir George Johnson does not seem to see that as long as he remains confronted with the positive evidence afforded by fermentation and by the crystalline osazone production, which is with the greatest facility obtainable (what I have said upon this point is confirmed by German authority), all the evidence of a negative nature that he may bring forward goes for nothing.

I am, Sirs, yours faithfully,

Grosvenor-street, W., Jan. 16th, 1895. F. W. PAVY.

THE DEBATE ON THE NATURE AND TREATMENT OF PERITONITIS AT THE OBSTETRICAL SOCIETY.

To the Editors of THE LANCET.

SIRS,—In the recorded discussion of Dr. Shaw's paper at the Obstetrical Society it seems to me that my views and teaching in this important subject have not been understood as I wish they had been, and that I am thereby submitted to an amount of misrepresentation and denunciation which is not merited. It may be, however, that I am at fault to the extent that I have not plainly expressed myself, but I can hardly put this forward, seeing that Mr. Frederick Treves in his recent address on this subject has most fully expounded my views in a very few sentences, and has given me praise for my advance, which I esteem very highly. In the necessarily abbreviated report of such a debate it is difficult to assert that the misrepresentation must arise from a misunderstanding on the part of the speakers. Thus the President says that he cannot accept my statement that peritonitis could be prevented by purging the patient. I cannot accept his statement that it is now established that peritonitis was produced by micro-organisms. Probably if we were to discuss each of those statements quietly we should find some truth in both, yet in each a large amount of error. Certainly, if I have ever said anything which has been taken to mean that peritonitis is to be prevented by purging I shall withdraw it when I revise my writings, but at present I cannot find it.

Let me briefly restate my position, which has not altered materially since 1885. Now that we have got quit of the rough mechanical and poisonous causes of peritonitis, as by the displacement of the "murderous clamp," by the ligature, and the substitution of gentle washing instead of rough sponging, the great bulk of our operations get well without even a threat of peritonitis, or whatever the condition which caused our heavy mortality may be named. Permit me here now, in intimate connexion with this part of the argument, to correct misstatements which I have lately seen in wide circulation in America, doubtless made by the incredulous for the purpose of reconciling their theories with my facts. The statements are to the effect that I always use boiled sponges and boiled water. To boil a sponge is to ruin it, and I have never made use of any effort, by boiling or otherwise, to sterilise the water I use for surgical purposes. Those who use the word *peritonitis* to signify the

usual process of death, or, at least, serious progress towards it, after abdominal operations have got into a way of dividing the disease into "septic" and "non-septic," the natural outcome of which is that the former term is applied to the fatal cases and the latter to those which recover. This may be convenient, but it is neither convincing nor free from a risk of blinding us to the actual facts of the case. From my study of clinical facts and post-mortem appearances I cannot discriminate between "septic" and "non-septic" peritonitis. That there is such a thing as septic peritonitis is made clear beyond dispute by the facts of puerperal deaths, but it is in the history alone that the septic element can be revealed. I have said that the great bulk of our operations now recover without trouble or treatment of any kind. For convenience let us assume that it is 85 per cent.; the other fifteen cases give us troubles of various kinds, and some end in death. Excluding the very few cases of eccentric damage, such as secondary hæmorrhage, injury of ureter or intestine, the troublesome cases have a singular uniformity in their downward progress. Of course they are not all alike; but their resemblance is about as close as are individual instances of any ordinary disease, and their course is about as follows: the first change is one of facial expression, quite indescribable in character, but easily caught by the experienced eye, and a sign which gives warning long before danger is indicated either by pulse or temperature, guides which are by no means infallible; in fact, whilst I rigidly keep to the fashion of recording the curves of pulse and body heat I have long since abandoned reliance on them save as confirmations of what I knew before.

The next indication of downward progress is distension of the epigastrium by collection of gas in the transverse colon. If unrelieved this steadily passes into general distension. Slight occasional beef-tea vomiting comes on speedily after the disturbance is well established, and is rapidly developed into vomiting of bilious matter—at first green, then brown, then coffee-ground, and then—silence. Two points I have long ago and persistently insisted on. The first is the immediate relief of distension by purgatives, by mouth and rectum, so that I have roughly described the process as one of a race between the distension and the treatment. If the distension is not, or cannot be, overcome the patient usually dies. Usually the treatment is effective, for my nurses are drilled in the utmost vigilance in the matter of distension, and engage in its treatment at once, so that in my practice the old-fashioned death from progressive distension has become a rarity. The nurses are, of course, cautioned against the treatment in certain special cases, where it is clearly contraindicated by the nature of the operation. When such cases do succumb the post-mortem reveals the old-fashioned appearances of peritonitis. In the other cases, have I stopped peritonitis in its early stages? or have I prevented it, as suggested by Dr. Herman's denial? or have I cured it? or was there ever peritonitis present in the cases that got well? a question answered by vehement denial by a recent writer. These are very interesting subtleties for some minds—I don't trouble mine about them at all. The success of the purgative treatment of these cases, well enough defined as they must be in the practice of everyone, has now secured a world-wide recognition, and I don't care a fig about pathologico-metaphysical conundra. The second point on which I lay stress is that of time—and here I have not been so successful in securing the ear of the profession. But it is simply this, that after a completed abdominal section symptoms and conditions may occur harmlessly on the ninth day which would be fatal on the fourth. I earnestly ask those practising abdominal surgery to watch for illustrations of this curious fact, and I apologise for its further repetition.

I am, Sirs, yours truly,

LAWSON TAIT.

The Crescent, Birmingham, Jan. 14th, 1895.

PERNICIOUS ANÆMIA.

To the Editors of THE LANCET.

SIRS,—With reference to the report on Pernicious Anæmia in Fiji, by Mr. C. T. W. Hirsch, in THE LANCET of Dec. 1st, 1894, having been myself for nearly three years medical officer in the district from which he writes, I should like to make a few additional remarks. The first notes I found of pernicious anæmia in that district were in 1884 or 1885 in which attention was called to the slight influence drugs (iron, arsenic, &c.) had on its progress. From 1890–92 it was in my experience very common amongst the East Indian immigrants. Natives and Polynesian immigrants, though working under similar conditions, but feeding more on solid root foods—e.g., yams—and being more cleanly, both in general habits and feeding, were rarely affected. The symptoms and course of the disease, as described by Mr. Hirsch, were much as I observed them, with the exception that out of 100 consecutive cases I found no retinal hæmorrhages. In about 50 cases examined post mortem, without exception I found numerous ankylostoma, and associated with them the same series of changes as described by Mr. Hirsch. Since leaving Fiji I have been pathologist to the Public Hospital, Georgetown, British Guiana, and in the course of some 1400 post-mortem examinations and numerous clinical observations have had ample opportunity of studying the changes associated with the presence of the ankylostoma. I find them in most respects identical with the so-called pernicious anæmia. The blood is thin and has little tendency to coagulate, the red corpuscles are reduced in number (frequently less than 18 per cent. of normal), whilst the hæmoglobin is only proportionately reduced; and the organs—in particular, the heart, kidneys, and the liver—are in an extreme state of fatty degeneration. In marked contrast with the latter is the highly coloured bile; there is almost invariably a deposit of hæmatoidin in the hepatic—and frequently in the renal—cells, with occasionally colourless granules, which give the iron reaction with acid ferrocyanide. The only difference noted is the absence of other than intestinal hæmorrhages. My recollections of the post-mortem examinations and cases I saw on the Rewa are so closely comparable to these that I have now, as I had then, no doubt that the disease is really ankylostomiasis. The non-observance of the ankylostomum by Mr. Hirsch in some of his cases was possibly due to the fact that ankylostoma, even before putrefaction has commenced (less than twelve hours in Fiji), cease to attach themselves to the intestines and, if a current of water is used to wash the intestines, will be washed away, or, if the fæces be wiped off with the finger, will be found in them, and not on the intestine. If either method be adopted, and the fæces or washings be not examined separately, even very numerous ankylostoma will readily escape detection.

In conclusion, the oil of male fern is not to be compared for efficacy with thymol, but even the latter, unless great care is taken in administration, will frequently be disappointing. The simple fact that thymol has been ordered and possibly given proves little. Unless care is taken to prove that considerable numbers of worms have been expelled, and by frequent examinations of the stools after the administration to show that few or no ova are found, little reliance can be placed on the results. Of course, the resemblance of the disease to pernicious anæmia is greatly in favour of a toxic action of the ankylostomum rather than the old theory of numerous minute hæmorrhages. The frequent presence of ankylostoma, even in numbers, without any obvious symptoms resulting, is not easily explicable, though in some of these cases I have found a slight illness, from which the patient apparently recovered, to serve as a starting-point for the progressive pernicious anæmia, checked only by removal of the ankylostoma.

I am, Sirs, yours truly,

C. W. DANIELS, M.B. Cantab.,

British Guiana Medical Service; late District Medical Officer, Rewa, Fiji.

British Guiana, Dec. 24th, 1894.

SEIZURE OF TINNED FOOD.

To the Editors of THE LANCET.

SIRS,—When sanitary officers are about to seize unsound food, more especially that which is tinned, I should like to point out a legal technicality which has arisen through the decision recently given in the case of Regina *v.* Dennis. This decision, it will be remembered, is the result of the appeal decided by eleven judges. The case is reported at some length in the *Justice of the Peace*, Sept. 29th. The conviction against Dennis was quashed, ten judges assenting. Mr. Justice Mathew, the only dissenting judge, in giving his opinion stated: "I do not see why, if the notice in question should be held to exonerate the seller, a notice to the same effect set up in the shop or on the barrow of the buyer should not be equally available to him as an answer to proceedings for seizure, condemnation, or punishment

under the statutes." I will now explain how this statement has bearing upon a seizure recently made in my district. On the night of Nov. 30th 392 tins containing lobster were seized in Chrisp-street, Poplar. At the time of seizure 15 tins were opened on the barrow, 156 tins were also opened but placed under the barrow, and the remainder were unopened on the barrow. On the barrow was exhibited a good-sized card stating, "Fresh lobster, 1½*d.* a tin; all bad ones changed." The 392 tins were taken next day (Dec. 1st) before Mr. Dickenson, the magistrate sitting at the Thames Police-court, who requested that all the unopened ones should be opened, and then he made the order for the contents of the whole number seized to be destroyed. The owner was summoned on Dec. 7th for the exposure of the lobster. The defendant's solicitor pleaded that the contents of the tins under the barrow were not exposed for sale, but were placed there in order to be destroyed, and that the contents of the only tins exposed for sale were those of the fifteen opened ones on the barrow; and he argued that so far as the unopened tins on the barrow were concerned the defendant covered himself by exhibiting the notice, "All bad ones changed." When I was giving my evidence I was asked, "Did I see these fifteen tins apart from all the other opened tins?" My answer was in the negative, for when the sanitary inspector sent for me to go to Poplar Police-station the fifteen opened tins were mixed with the other opened ones taken from under the barrow; but I explained that these fifteen opened tins could not have been good because there was not one good tin among the whole number seized. The defendant was fined £5 and 30*s.* costs. Now, Sirs, as I was unable to pick out the fifteen tins, I feel certain that a conviction would not have been obtained if the whole number of opened tins had not been bad. This shows from the recent decision, in order to obtain a conviction for exposure, the importance of keeping separate at the time of seizure of tinned food any tins exposed on a barrow or stall. This may seem a trivial point to write about, but I have had some little experience in seizing tinned food in the streets, and I may say the duty is not a pleasant one, especially in a crowded market street late at night, when one is liable to be hustled and the tins mixed. I am, Sirs, your obedient servant,

FREDK WM ALEXANDER,
Medical Officer of Health, Poplar and Bromley.
Wellington-road, Bromley-by-Bow.

ISOLATION OF CASES OF OVARIOTOMY.

To the Editors of THE LANCET.

SIRS,—In your account of the proceedings of the last meeting of the Royal Medical and Chirurgical Society I am reported to have said that I "did not see great objections to ovarian cases being put in general wards." May I ask you kindly to allow me space to explain that I said it seemed to me most undesirable to put these cases with other patients until convalescence was so far advanced that a satisfactory termination of the case was assured? Septic peritonitis is the great danger of these cases, and septicæmia is more apt to occur when a patient is put in a ward beside others suffering from various diseases than when she has a room for her own use, and the risk of infection is especially increased in drainage cases. It should be remembered that with a wounded peritoneum mischief of an irreparable nature may be done in a moment, and that a degree of septic infection which would only cause a temporary rise of temperature and irritation of tissue, with perhaps an abscess formation, in a superficial wound such as that of an amputation of the breast might kill with great rapidity if it came into contact with the peritoneum. Many cases of ovariotomy require constant attention from the nurses for three or four days, and sometimes much longer, after the operation, although they may eventually make complete recoveries. It cannot be good for the patient herself to lie in a general ward when she is very ill, or for other patients to see her in that condition; and as it is quite impossible to tell beforehand whether a patient will require drainage of the peritoneum, and whether she will make an easy or a difficult convalescence, it seems to me that the plan of isolating these cases has all the advantages that can be claimed for their treatment in a general ward and many recommendations besides. Ovariotomy could hardly have been brought to its present state of excellence without isolation of the patients, and this excellence is not likely to be maintained and increased if less care and attention are devoted to the patients than formerly. I am strongly of opinion that it will be found to conduce to the safety of patients, after abdominal section has been performed, to treat them in private wards as long as they are acutely ill.—I am, Sirs, your obedient servant,

Portman-street, Jan. 12th, 1895. JOHN D. MALCOLM.

"THE BARIUM WATERS OF LLANGAMMARCH AND THE THERAPEUTICS OF BARIUM SALTS."

To the Editors of THE LANCET.

SIRS,—Dr. Cruise's letter in THE LANCET of the 12th inst. on the use of barium salts appears to me especially valuable as indicating the smallness of the dose (one-sixth of a grain of the iodide three times a day) required to produce "remarkably good results," his experience extending over a period of thirty years. Whether the iodide is a more active or more desirable form for administration than the chloride I will not now discuss; but from my personal knowledge of the favourable results experienced from the use of the Llangammarch water I should prefer to prescribe it in the form in which it exists in that spring. It is to be hoped that neither medical men nor their patients in their anxiety to try a new remedy will be led into the error of adopting any but the most moderate doses, for I feel convinced that experience will demonstrate that all the beneficial results are to be obtained from doses considerably less than a grain of the barium salt—that is to say, in tumbler doses of the Llangammarch waters. Judging from the similarity to arsenic in some of its effects as an alterative, together with what I have learnt of the remarkable benefit that has accrued from the use of the Llangammarch waters in some cases of anæmia, some of which are mentioned by Dr. Bezly Thorne in THE LANCET of Dec. 1st, 1894, I am strongly impressed with the probability of its proving beneficial in cases of pernicious anæmia. It certainly merits a trial in that direction. Another class of cases in which I have known it to prove serviceable is in chronic gastric catarrh and in flatulent dyspepsia.—I am, Sirs, yours faithfully,

FREDERICK GEORGE, M.D.
Albemarle-street, W., Jan. 15th, 1895.

CORONERS' INQUESTS.

To the Editors of THE LANCET.

SIRS,—The question whether, in these days of improved medical science and the daily paper, it is necessary to maintain the obligation upon coroners and their juries to view dead bodies upon which inquisitions have to be taken is one that is constantly cropping up, and every session of Parliament sees a Bill introduced by a different group of members, having for its object the relief either of the coroner or the jury, or both, from the duty, or leaving it to the coroner to determine whether the jury shall view or not in any particular case. Attention having been drawn to the subject by a resolution of the council of the Coroners' Society, expressing the opinion of the council "that no alteration in the existing law is required or is desirable, and, further, that an attempt to do away by law with the view of the body by the coroner and jury would be prejudicial to public interest and policy and detrimental to public confidence in the court," which appeared in THE LANCET of Nov. 17th, 1894, I venture as a provincial coroner to submit that there are two sides to this as to most other questions, and that even among coroners there is a difference of opinion on the subject. May I beg space to discuss it in some detail? Those coroners who support the maintenance of the *status quo* assert that the whole of the coroner's jurisdiction is based on the existence of a dead body, that though a person be lost the coroner has no function to inquire after him unless and until his dead body is found, and that the inquisition can only be taken *super visum corporis*, and that the dead body itself is a material part of the evidence upon which the jury must ground their verdict; that if coroners lose the right to view the body they will weaken their right to take possession of and deal with it as they think necessary by way of post-mortem examination or otherwise, so as to ascertain the true cause of death; that the view is an ancient and desirable part of the proceedings of an inquest, and ought not to be lightly given up.

Those coroners, on the other hand, who consider that a

change is desirable argue that, however necessary it may have been in ruder ages for the body to be viewed, when deaths by violence or exposure were more common than happily they are to-day, and medical skill and science were not so readily procurable as evidence to lay before the jury, still, in these days of glaring publicity by means of the daily papers and the ubiquitous pressman, the view answers no useful purpose; that the view may be of any other use than to demonstrate the existence of a dead body, the body must be examined by the jury, back, front, and sides, involving an indecent exposure of it that is most unbecoming, and in all cases of natural death the proceeding gives no information to the jury whatever. If death has been due to violence, as by accident in machinery or running over by a locomotive, and the body is much mangled, a medical man or a butcher may view it without abhorrence, but the ordinary juryman can learn nothing from the spectacle. Neither can he tell whether a person with a cut throat has been murdered or has committed suicide; he has to rely on medical evidence as to the extent and direction of the wounds to enable him to form a judgement. So on the question of establishing identity. The view may have been useful in early days when people did not move far from home in a general way and the whole of the inhabitants of the locality above twelve years of age were required to attend the inquest. But now how are things changed. A jury is summoned to inquire into the death of a miner in a county hospital. He has been brought in from a colliery miles away; the jury live within a radius of half a mile from the hospital. How can the view help them? It would seem reasonable, if a man has been killed by machinery, a fly wheel, or a revolving shaft, or what not, that the jury should view the scene of the accident, for then they could judge of the degree of responsibility of the owner of the premises, but what can they learn from the body except its existence? And still stronger is the argument against the view when death is due to natural causes and a post-mortem examination has to be made to ascertain the precise cause. Of course, the conditions under which inquests are held in different parts of the country may, and probably do, affect the opinion of coroners. In London, if I am not misinformed, the coroners hold their inquests in a suitably equipped court, and the bodies lie in a mortuary conveniently near to the court, so that they may be viewed by both coroner and jury without trouble or loss of time. In Liverpool and Birmingham, and possibly other large towns, the coroner has a central court where the jury assemble and are taken thence in a coach from house to house where the bodies lie, in order that they may see them before hearing the verbal evidence. Imagine what this must mean in loss of time to a dozen or more jurymen, who, if they receive any remuneration at all, receive only an honorarium varying from 8*d.* to 1*s.*

In most smaller towns no coroner's court is provided, and the mortuary accommodation is usually of a very limited description. Consequently, in order that the view may be performed, inquests are held in the public-house nearest to the house where the body is lying, and the jury and coroner have to parade in a body through the streets, followed by a crowd of curious children, or, maybe, in a pouring rain or driving snowstorm, oftentimes into a tiny cottage, up a dark and crooked staircase, to a small back room lighted with a tallow candle or small paraffin lamp, and with a floor which it is by no means certain will bear the weight of the party; then back, wet and ill-tempered, to the public-house, where the witnesses will be found either taking advantage of the hospitality of the house or huddled together on the stairhead outside the club-room, because there is no ante-room available wherein they can sit. But in the country districts how are things managed? I prefer that some county coroner should, if he will, describe them. Country jurymen, I believe, usually have some remuneration paid to them for their time and service, but how far it exceeds an honorarium or is worth carrying away as cash from the inn where the inquest is held I cannot say. My position, therefore, is: relieve the jury from the obligation to view, except in cases where the coroner feels that they can gather some useful information from it, or where, after hearing the evidence, they themselves express a desire to see the body. A simple enactment, "It shall not henceforth be compulsory upon the jury except, &c.," is sufficient. But because I believe that the general public attach great value to the duty of the coroner, and would feel greater security and satisfaction if he remained under the obligation to view, I submit that this obligation should be retained. The coroner is more or less adequately paid for his services, and must be content to take the disagreeables of the office with its sweets—he need not take either unless he likes; but the jury are pressed into the service whether they will or not, and usually without anything but a nominal acknowledgment for their time, and therefore ought not to be required to undergo a disagreeable and practically useless ordeal, but for which they might be summoned to a suitable court, where the inquiry would be conducted with some show of decency and dignity instead of under such conditions as I do not care to describe in further detail. By such a course no possible advantage, so far as I can see, would be surrendered by the coroner, while a duty which at no time is a particularly pleasant one would be rendered less irksome to a multitude of people, and the office, therefore, would become more popular and secure.

I am, Sirs, yours faithfully,

Nottingham. CHAS. L. ROTHERA.

*** There are good arguments for and against the abolition of the procedure. It is clear that if the jury view the body, such view should take place under the most favourable circumstances; say through a window, and certainly not under conditions likely to be of personal danger to them. It is possible that the view may be required for purposes of identification, and the dispensing with the ceremony might complicate very much the position, for example, of the surgeon making the necropsy. A sudden death attended with no suspicious circumstances might, upon post-mortem examination, be found to be due to poisoning, and a charge of murder ensue. If the body has been viewed by the jury no difficulty can arise, as the necropsy has been performed upon a corpse which has been seen by the jury, and has been identified on sworn evidence before them to be the particular body. In the absence of the ceremony of viewing, the examining surgeon might be placed in a serious difficulty. But proofs of identity by trustworthy witnesses are generally forthcoming, and no one can desire to thrust upon the juryman without adequate motive, and with possible risk to his health, the presence of death in a repulsive form.—ED. L.

SEA-SICKNESS.

To the Editors of THE LANCET.

SIRS,—May I enter a slight protest against the universally enthusiastic reports which have hitherto appeared on the action of chlorobrom in sea-sickness? After some months' trial of it I found the results quite as unsatisfactory as those from any of the other so-called specifics. Its action is certainly too depressant for use in very severe cases, especially in debilitated subjects, such as are sometimes met with returning from the East. I have found acetate of morphia give very fair results in most cases, administered in minute doses frequently repeated, care being taken that only the stimulant effect is produced. Minim or two-minim doses of dilute hydrocyanic acid may be added with advantage. Of more importance, however, I think, are other palliative measures, such as the removal of a patient to a well-ventilated midship cabin, with the berth running fore and aft, and the removal of any articles which can swing or roll about with the motion of the vessel. In connexion with the latter precaution it is interesting to note that since fixed electric lamps have superseded the old-fashioned swinging oil-lamps in ships' saloons much less discomfort is felt by indifferent sailors and fewer cases of sudden retreat from the table occur.

I am, Sirs, yours faithfully,

Dec. 12th, 1894. A. M. C.

THE ABUSE OF HOSPITALS, DISPENSARIES, AND CLUBS.

To the Editors of THE LANCET.

SIRS,—With the abuse of hospitals, dispensaries, and clubs existing, is it not time that a table should be drawn up by some authoritative body and a minimum fee fixed? The struggle for existence is so severe that anything which takes

away many hundred pounds from the younger members of our profession should be closely criticised. I know one public charity where it is gravely contended and practised that the families of policemen and fire brigade men should be attended free. I venture to suggest two points. Firstly, that all applicants for hospital, dispensary, or club treatment should state the total income of their families, which should be entered on the usual card or letter. In this way we should be able to get at the income of those using our charities, if nothing else. If applicants make false statements would it not be possible to prosecute (one or two for an example) for obtaining charity and medical treatment under false pretences? If charities refused to carry out these rules it should be a bar to any participation in hospital funds &c. (Sunday, Saturday, &c.). If medical men should so far forget themselves as to support such a charity, ought they not to be blackballed? Secondly, the following table is suggested for the purpose of discussion: 1. To be eligible to all free charities—*(a)* single applicants earning less than 18*s.* a week; *(b)* married applicants earning less than 25*s.* a week. 2. Applicants with family earning less than 30*s.* a week to pay up to 3*d.* a week in any club or public dispensary. 3. Applicants with family earning less than 33*s.* a week to pay up to 6*d.* a week in any club or public dispensary. 4. Applicants with a family earning less than 36*s.* a week to pay up to 9*d.* a week in any club or public dispensary. 5. Applicants with a family earning less than 40*s.* a week to pay up to 1*s.* a week in any club or public dispensary, and so on.

A public dispensary in each district, especially towns, to which all medical men residing in the district should be eligible, would be beneficial both to the public and the younger members of the profession. One medical man might be appointed to the dispensary for each ward of the district. The public dispensary to be controlled by an equal number of medical men and members of the dispensary &c., the chairman to be a medical man. Details such as number of wards in district and election of medical men and committee are minor details. I am, Sirs, yours faithfully,

Jan. 14th, 1895. PHYSICIAN C.

To the Editors of THE LANCET.

SIRS,—I consider that the letter appearing in your issue of last week does not appear too soon, and I hope not too late, to put intending candidates for the Pendleton Dispensary in Manchester upon their guard. There is an advertisement in one of the daily papers to-day (Tuesday), which, of course, gives no information to candidates of the conditions of the appointments. The gentlemen who have resigned have for the most part been engaged upon the staff during several years, have acquired large private practices, and are well known, who will oppose the dispensary to the utmost degree on its own lines, and who have been positively driven to this course; by their action at various times in the interests of the profession at large, and as a protest against unprincipled interference on the part of lay committee men. I am not, nor ever have been, in practice where these medical men have resigned, so that I can write with more freedom. I am reluctant to trespass upon your space too far at present, for the indictment against the provident dispensary system is a long one, but wish to point out to those who desire to try their fortune the following points: (1) to insist upon a guaranteed minimum salary, otherwise they may be told at the end of a quarter that they are entitled to half the subscriptions of a dozen members; (2) not to bind themselves not to practise in the district; and (3) to see that the rules are strictly carried out in their favour.

I am, Sirs, yours truly,

Jan. 15th, 1895. M.D.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Twenty-fifth Anniversary of Hospital Sunday.

ON Jan. 8th, 1871, Hospital Sunday was first observed in Liverpool, after a somewhat perilous launch, in which its promoters were much assisted by THE LANCET, which had for some time previously warmly advocated the cause as worthy of adoption throughout the length and breadth of the kingdom. Those who urged its adoption gave £4000 as a probable result, instead of the paltry sum (less than £1000) which a few favoured medical charities had previously received, while other institutions had received nothing at all from church or chapel collections. The total of the first Hospital Sunday collections reached £4765, the total for 1872 being £6923; this upward tendency was maintained in the two following years, which produced £8124 and £8848 respectively. Since then the tide of charity has ebbed and flowed. The average amount of the Sunday collections for the twenty-four years which have passed since Hospital Sunday was first established in Liverpool has been £6979, a sum which has fully realised the wishes of those who promoted this means of raising money for the local medical charities. With the aid of Hospital Saturday a sum of nearly a quarter of a million has been raised in twenty-four years. Last Sunday was the twenty-fifth anniversary, or "silver wedding," of Hospital Sunday. A bitter north-east wind and a heavy mantle of snow, though appropriate in one sense to a silver wedding, was hardly conducive to large congregations. Still, the date being always the same—the second Sunday of the New Year—there have been inclement Sundays before, and when such a magnificent average can be shown one feels the full significance of the old saying, "Leave well alone." Perhaps, however, the change of date from January to February may be practicable and profitable.

New Medical Magistrates.

Dr. William Carter and Mr. Richard Williams have been placed upon the Commission of the Peace for this city. Both of these gentlemen are well known and are highly respected by their professional brethren and by the public generally.

Jan. 13th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Wholesale Poisoning.

WHAT is now known as the "Wylde Green poisoning mystery," to which reference was made in the columns of THE LANCET last week, has been the subject of much discussion. The actual cause does not even yet appear to be clear, in spite of the light brought to bear upon it. It seems that over 100 people partook of some soup prepared by the landlady of a public house. Nearly all these persons were subsequently seized with sickness, diarrhœa, and collapse in varying degrees of intensity. One woman aged forty-seven died. With regard to her case it is but fair to state that she had been an invalid for some length of time, but that her immediate end was brought about by this particular soup. At the inquest held upon her body it was shown that the meat from which the soup was made was what is known in the trade as "stickings," and that along with a number of other pieces of the same kind it was kept at the butcher's in a tub of brine. The composition of this was stated, and it was proved that other pieces from the same tub were sold without injury following. Dr. Hill, the borough analyst, had examined the soup, but found no poison. His opinion was that the death and illness resulted from septic change in the brine. The inquiry was adjourned for a post-mortem examination to be made, the coroner adding that an expert should be sent to assist the medical man in charge.

Another Form of Poisoning.

The coroner for West Bromwich on the 7th inst. held an inquest on a boy five years of age who had been eating tobacco. The medical man who made the necropsy attributed his death to this poison, and a verdict was given accordingly. There is no accounting for perversion of tastes, but in an instance of this kind it can hardly be thought that a small boy would eat tobacco from choice—certainly not if anything more acceptable was at hand.

Lectures on Diphtheria.

The health committee having instituted a series of lectures on the Laws of Health, the subject of Diphtheria was discussed by Dr. Line on the 11th inst., Alderman Cook, the chairman of the committee, presiding. Mr. Cook contrasted the death-rate of Birmingham with other towns from this cause and dwelt upon the precautions necessary to avoid this disease, such as cleanliness, isolation, ventilation, and dry houses. Dr. Line's address was listened to with much interest and attention.

The Weather, Sickness, and Work.

In spite of the severe weather in various forms of intensity

thick fogs, acute winds, and deep snow, there is a prevailing impression that the health of the district is unusually good. From conversations with several medical men in different districts it has been gathered that they have never had so little to do at this time of the year. No doubt some of this may be due to the more active competition in the profession, and the readiness with which work is seized by newcomers. Apart from this unfortunate cause the complaint is one of general slackness and inactivity.

Jan. 16th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Medical Education of Women in Edinburgh.

THE annual report of the Scottish Association for the Medical Education of Women has been published. It is noted with satisfaction that for the first time since the formation of the association income and expenditure have nearly balanced each other. There has been a continued steady increase in the number of students attending the college of the association in Chambers-street. Reference is also made to the fact that by reasonably pushing the claims of the association their college has been recognised by the University of Edinburgh as a medical school whose course of instruction should qualify for graduation in medicine, and the court of the association hopes that this will increase the interest taken in the association and the work it is doing, for it increases the responsibility for having the college fully equipped. The court further draws attention to the fact that the University retains the right to withdraw the leave granted to extra-mural teachers of providing a complete course of instruction for graduation in medicine for women. If the intra-mural classes be opened to women they will be put on the same footing as the male students, and will require to take at least one-half of their medical course within the walls of the University. A school for female students only, affiliated to the University, would put the thorough medical education of women on a permanent basis, do away with the necessity of disturbing university arrangements for the instruction of male students, and be a fitting complement to the other educational facilities provided in Edinburgh. The report makes an appeal for endowment, which is considered to be an essential to the successful application for affiliation.

Annual Report of Queensberry House, Edinburgh.

As has been noted on previous occasions in THE LANCET, this institution is a home for inebriates, and also for aged and infirm persons who can pay a small sum for board or are paid for by their friends or relatives. The report shows that the daily average number of inmates was 271. Dr. William Russell, the visiting physician to the institution, says in his report that the past year was characterised by an exceptionally low rate of sickness. Twenty-three deaths had occurred during the year, and of these 60 per cent. were of persons over seventy years of age, while only four were not above sixty years; eight deaths occurred between seventy and eighty years, four between eighty and ninety, and two were in persons of ninety years or more. Dr. Russell attributes the prolongation of life in a large measure to the physical comforts with which the inmates are surrounded and the simplicity of their diet. In regard to the deaths it is noted that in nearly every instance death was due, not to the exhaustion and debility of old age, but to a distinct lesion of some special organ.

Small-pox in Edinburgh and Leith.

Ten fresh cases of small-pox were reported in Edinburgh and two in Leith during last week; in this period there were two fatal cases of small-pox in Edinburgh.

Royal Lunatic Asylum, Glasgow.

During the past year 149 patients were admitted to this asylum; 113 were discharged (47 of these being recoveries) and 31 died. The year had begun with 490 resident patients, and it closed with 495, the private patients numbering 374, and those chargeable to parish authorities 121. Sundry changes have been made recently in the asylum, all contributing to its efficiency. Among these may be mentioned arrangements for a more copious water-supply (to ensure the safety of the building in possible emergency) and the fitting of a smoke consuming apparatus to the boiler furnaces—the latter a step which the other hospitals of the city should take without delay, were it only for the sake of example to the smoke producers.

Glasgow Convalescent Home.

This home, now in its thirty-first year of existence, has sheltered no fewer than 1747 patients, whose average stay had been sixteen days and one-seventh, at a cost of £1 6*s.* 1¼*d.* per patient. Unfortunately, like so many other medical charities, its income fell short of its expenditure by about £300.

Suffocation by Gas.

Last week an entire family, consisting of husband, wife, and five children, living in a sunk flat in one of the poorer districts of Glasgow, were suffocated by gas which leaked from a broken gas-main in the roadway. The breaking of the pipe is attributed to the recent severe frost. Six months ago another family, also living in a poor part of the city, and numbering five members, were similarly killed, the gas in this case coming from the open end of an abandoned pipe. Both accidents point to a certain degree of carelessness in workmanship, and emphasise the terrible risks run by those who live in such half-underground hovels (which should not be allowed to exist in our midst), while the importance of even a little ventilation, especially in crowded apartments, is abundantly demonstrated.

The Illness of the Duke of Argyll.

The fainting fit into which the Duke of Argyll fell when addressing a political meeting on Wednesday evening last produced a profound sensation in Glasgow, which rapidly spread over the United Kingdom. His Grace soon rallied, and all alarming symptoms had subsided by Thursday morning.

Jan. 15th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Outbreak of Small-pox in Dublin.

DURING the week ending the 12th inst. 88 cases of small-pox were admitted to hospital, being 17 in excess of the admissions for the previous week. Eleven deaths were recorded from small-pox, and 194 remained under treatment on the 12th inst., being 24 over the number in hospital at the close of the preceding week. Since the appearance of the disease in July last 84 deaths have occurred, all of which, with one exception, took place in hospital.

Accident to Mr. E. S. Bricknell of Queenstown.

As Mr. Bricknell was walking last week in Queenstown he slipped and fell on the footpath, which was very slippery from the frost, and sustained a fracture of the right arm a little above the elbow. He is progressing satisfactorily.

An Unfounded Rumour.

It was rumoured last week that the President of the Royal College of Surgeons in Ireland and a physician in Dublin had been offered the honour of knighthood, but the statement was without foundation.

The Position in Cork.

The attitude of the medical men in Cork remains exactly the same, and as this attitude has been unanimously adopted it must result in victory. The medical men so obviously demand only what is fair—viz., that they should be paid by those who can afford to pay them—that no other issue was to be expected.

Proposed Presentation to Dr. H. St. J. Brooks.

A number of friends of Dr. H. St. J. Brooks have decided to make a presentation to him on the occasion of his leaving this country for Australia. A committee has been formed, consisting of the present staff of demonstrators in the School of Anatomy, Trinity College, Dublin, to communicate with those past students who have had the benefit of his teaching and with those who have known him during the thirteen years that he has been associated with the school as Chief Demonstrator and University Anatomist. Subscriptions to the presentation will be received by either of the following gentlemen (addressed Medical School, Trinity College, Dublin): Dr. A. F. Dixon, Dr. H. C. Drury, Dr. E. H. Taylor, Dr. T. E. Gordon, and Dr. G. Jameson Johnston.

High Death-rate of Children in Belfast.

At an inquest recently held in Belfast, where a child died from being overlain in bed, the coroner animadverted on the high death-rate of children in that city. This was the fourth inquest on children he had already held in the present month, and he was surprised at the parents not taking even the trouble to get medical relief. The jury in their verdict said there was neglect on the part of the parents. The coroner administered a severe caution to the parents. He said Belfast was no exception to the rule in the matter of the high death-rate of children, for in Liverpool, Leeds, Manchester, and other large towns the death-rate was also very large. On examination he had found that a large number of those deaths occurred on either Saturday night or Sunday morning, and that it was to be attributed to persons getting their wages on Saturdays and becoming drunk, and so the children were overlain in bed. He hoped that that case would be a warning to other parents.

Jan. 15th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Sero-Therapy.

IT frequently happens that a discovery ridiculed at the time is subsequently applied practically by other persons and the credit transferred from the original discoverer to these latter individuals. In France sero-therapy is believed to date from the experiments of MM. Richet and Héricourt, already reported by me in the columns of THE LANCET. These *savants*, relying on the immunity of the dog to tuberculosis, employed the blood of this animal as a prophylactic. It was only in 1890 that they made use of dogs previously immunised artificially. The earliest communications of MM. Behring and Kitasato are dated 1890. There now comes forward M. Babès of Bucharest, who, through his friend Professor Cornil,[1] claims precedence in the discovery, alleging that his researches, conducted in collaboration with M. Lepp, were published in the Annales de l'Institut Pasteur in July, 1889, and that, further, they applied the method to human beings in the following year. M. Babès therefore claims the paternity of the following laws, wrongly denominated Behring's laws: 1. Immunity against an infectious disease may be conferred on animals by injections of the blood of another animal already strongly protected (artificially) against that disease. 2. The application of that method prevents the development of the disease in animals previously inoculated with the virus of that disease. Honour to whom honour is due; but suffering humanity will not be parsimonious in its thanks to both early and late workers in a field that bids fair to revolutionise the healing art and render the latter years of the present century famous in the annals of medicine.

A New Sign of Diabetes and Albuminuria.

M. Garel of Lyon[2] claims to have discovered a hitherto unrecorded physical sign which is almost pathognomonic of either diabetes or albuminuria. He states that many patients complain of a slight irritation of the throat—some difficulty of deglutition, a sensation of swelling, and constriction of the fauces. The soft palate, its pillars, and the posterior wall of the pharynx are found to be red and swollen, and frequently covered with a more or less viscid layer of mucus. In the majority of such cases examination of the urine reveals the presence of either glucose or albumen. Most of these patients present only quite insignificant general symptoms, so that M. Garel's discovery, if it be confirmed, is of considerable value. Of twenty-one individuals affected with this particular form of pharyngitis, ten had diabetes and eleven albuminuria, and in three of the cases sugar and albumen alternated in the urine. I would, however, ask if it be not the wiser plan to analyse, as a matter of routine, the urine of every new patient, more especially when middle age has been reached? In my own practice I make it a rule to do so, and I have thus avoided many a *fausse piste*.

Blood Changes in Myxœdema.

M. Lebreton[3] has recently studied the urine and blood of a myxœdematous child both before and after treatment with thyroid gland. In forty days the treatment had determined considerable improvement in the physical and mental condition of the child. The only modification in the urine noted during treatment was slight and transient albuminuria. As regards the blood before treatment it contained 1,750,000 red and 4500 white corpuscles, as against 2,450,000 and 9600 after treatment, the hæmoglobin being also increased in the proportion of 68 to 65. Before treatment the average diameter of the red discs was 0·1 mm, that of some giant elements reaching 0·57 mm. Treatment reduced the diameter of the coloured corpuscles to 0·57 mm. In preparations dyed with hæmatoxylic eosine there were seen some red discs provided with nuclei, which disappeared after treatment. The proportion of mononucleated to poly-nucleated leucocytes was raised by treatment from 15 to 25 per cent. to 30 and even 40 per cent., the latter proportion exceeding the normal. A considerable number of small lymphocytes present before had almost disappeared after treatment. Mucin, said to have been discovered by certain authorities in the blood of these patients, was conspicuous by its absence both before and after treatment. It would thus appear that myxœdematous blood differs from the normal fluid in the persistence of the fœtal hæmapoietic process, characterised by the presence in it of nucleated corpuscles and by the large diameter of the red elements. M. Lebreton's researches also show that the cure of myxœdema is synchronous with a leucocytic process of a particular kind, the increase in the white corpuscles involving exclusively the large mono-nucleated variety.

Prophylaxis of Malaria: the Best Forms of Quinine to administer.

The Société de Thérapeutique recently appointed a committee (MM. Adrian, Bardet, Berlicz, and Boymond) to report on the above question. The commission concludes that the employment of solutions of salts of quinine should be reserved for active attacks of malaria. The best prophylactic salt of quinine to use is the basic hydrochlorate, it being the richest in alkaloid and sufficiently soluble. It has a less irritating action on the stomach than the sulphate. The hydrobromate should be used only in cases rebellious to the hydrochlorate. As to the pharmaceutical form in which the hydrochlorate should be administered, compressed preparations are condemned, and pills made up with a soluble excipient or *perles* provided with a gelatinous envelope are recommended. Pills or *perles* containing each fifteen centigrammes of the chlorhydrate and given one in the morning and one at night, or else before meals, suffice to keep the system under the influence of quinine so as to ward off attacks of fever. In the course of the discussion following the reading of the report it was suggested that the War Office should be urged to desist from its attempt to manufacture on a large scale compressed tabloids of quinine for the use of the troops, seeing that the report was unfavourable to that method.

Arrow Poisons.

From a work by Dr. Lewin of Berlin, which work was analysed by Professor Brouardel at the Académie de Médecine (Jan. 8th), it results that the Somalis dip their arrows in a black substance called *waba*, extracted from a plant of the family Apocynaceæ. The Walaita employ crystallised wabaine, a product already studied by Fraser; other tribes of Central Africa use either amorphous wabaine or strophanthus, or a mixture of several other poisons. In Asia the poison employed for the purpose is generally aconite. In Tonkin several French soldiers were wounded with arrows dipped in the juice of antiaris toxicaria. M. Berthelot mentioned that certain tribes employed animal toxines as arrow-poisons, whilst others covered their arrow-tips with the excrement of certain animals.

Up-to-date Medical Advertising.

Visitors to Paris will be familiar with the advertisements with which the walls of the *chalets de nécessité* and such like useful structures are liberally supplied. From a perusal of these they learn that certain diseases can be cured by Dr. X. (dr. Speaks english, *sic*) in a surprisingly short time and with the greatest ease. But it has been reserved for the present year to show us the length to which such effrontery can go. On the drop-curtain of a certain theatre there may now be read, between two other advertisements relating to beer and pince-nez, the following: "Docteur-Médecin Spécialiste, 25 années de pratique, de midi à neuf heures du soir." Then follows the address.

Jan. 15th.

[1] Académie de Médecine, Jan. 8th.
[2] Congrès Français de Médecine Interne, held at Lyons.
[3] Société Médicale des Hôpitaux, Jan. 11th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

The Debate on the Antitoxin Treatment at the Berlin Medical Society.

THE most important event in Berlin medical life has undoubtedly been during the last few weeks the debate on the antitoxin question, which has already been alluded to in the pages of THE LANCET; but its importance warrants my returning to the subject. The paper read by Professor Behring at the Vienna meeting of the German Association, which was immediately afterwards telegraphed to all parts of Germany, excited public opinion to something the pitch evoked by the publication of Professor Koch's results with tuberculin. Wherever a child was taken with diphtheria the medical man was compelled by the parents to use the new remedy they had read of in the newspapers. The public attention was more awakened by an article Professor Behring had published in a widely read political journal entitled "Die Zukunft," in which he attacked Professor Virchow very severely. In this article he declared Virchow's pathological doctrine obsolete and prejudicial to further progress of medical science. Virchow, he suggested, did not consider a disease a distinct entity due to one specific cause, and thus to be treated by a specific remedy, but as a conglomeration of symptoms which were each to be cured separately. As it is, of course, quite unusual for medical men to dispute in political journals the astonishment at Professor Behring's proceeding was very great and general here. When a few weeks later an assistant of Professor Virchow, Dr. Hansemann, was announced to read a paper on antitoxin at the Berliner Medicinische Gesellschaft, everybody expected this would be an answer to Professor Behring's attack, and it is no wonder that the hall and the galleries were overcrowded. Dr. Hansemann first criticised the importance of Löffler's bacillus. He mentioned that it was not yet proved that this bacillus was the only cause of diphtheria as clinically recognised. There were many cases where the Löffler bacillus was missing; in the great majority of cases it has been found together with other bacilli; finally, it has been recognised in diseases like rhinitis fibrinosa, which were not to be confounded with diphtheria. Even in healthy persons its presence has been demonstrated. Concerning antitoxin Dr. Hansemann remarked that nobody had yet seen it. We only know that animals can be immunised by weakened cultures of Löffler's bacillus and that the blood of these can cure other animals attacked by the disease due to that bacillus. Professor Behring had, in his opinion, committed the error of transferring to men results obtained with animals in proclaiming that his remedy immunised, cured, and was harmless. As every practitioner knows, very often only one child in a family is attacked with diphtheria, whilst the others remain healthy. Thus it is impossible to say for certain if the immunity has been the effect of the antitoxin or not. On the other hand, several cases have been reported where patients have acquired diphtheria although injected very early with antitoxin The remedial effect of the antitoxin was very doubtful, Dr. Hansemann considered, on the following grounds: the diminution of mortality in some of the hospitals might have been caused by the minor gravity of this year's epidemic; the presence of Löffler's bacillus being regarded as sufficient for diagnosis, many cases formerly denoted as simple tonsillitis, from which the patients would have recovered without treatment, are now classed as diphtheria; and cases where, notwithstanding an early injection, the patients have died are not very rare. All, he thought, still agreed that the cases of septic diphtheria remained hopeless, while finally the remedy cannot be regarded as harmless, as severe symptoms have been remarked to ensue upon its injection. The discussion which followed Dr. Hansemann's paper lasted not less than three sittings. Professor Bergmann, who spoke first after Dr. Hansemann, declared that he was contented with his results obtained by the treatment, although he had begun it with a certain scepticism, natural after his bad experiences with tuberclin and tetanin. He had no doubt that Löffler's bacillus, found by him in 450 out of 470 cases, was the cause of diphtheria. Professor Virchow, who rose next, defended with great warmth the new method. The surprise at this was very great, because it was generally believed—and natural to believe—that Dr. Hansemann had been more or less commissioned by Professor Virchow to proclaim his (Professor Virchow's) opinion on Professor Behring's work. Professor Virchow, though he did not agree with the theoretical views concerning the specificity of Löffler's bacillus, drew the attention of the society to the fact that the mortality in the Friedrich Hospital, of which he himself is a warden, diminished as soon as the new remedy was used. Each time the supply of antitoxin failed the mortality rose again until a new quantity could be procured. Professor Hahn said that he could see no difference in the mortality between those who had been injected and those who had not, but he kept an open mind on the point because in the hospital to which he was attached, which is situated in a very poor quarter, children are usually brought in too late to be treated with any success. Dr. Baginski said that he had very satisfactory statistical records. Professor Liebrich, the pharmacologist of the University, who is known to be opposed to bacteriology in general and to antitoxins in particular, invited the society to try injections of pure serum without cultures of bacilli, a method which he believed would be successful. Dr. Aronson suggested that in many cases where the method failed the quantity of the antitoxin injected must have been too little. To sum up the whole debate, the feeling generally was that the time has not yet come to pronounce a final judgment on this important question, as it could not be clearly proved that the lowering of mortality was due to the treatment or to the milder character of this year's cases. But all were agreed that the complications reported by Dr. Hansemann as following upon the treatment were of no importance, and that no patient had come to any harm by the injections. It was a subject of general remark that none of Professor Koch's or Professor Behring's assistants said a word in the debate.

The Reform of Medical Service in Berlin Municipal Hospitals.

In German hospitals the number of patients treated by one medical attendant is usually far greater than in other countries. Especially has that been the case in the Berlin municipal hospitals. There were until last year only one staff surgeon and one staff physician in these hospitals, and they, with the assistance of their resident medical officers, had each the care of 300 patients. They could, of course, not personally see so great a number every day, and were thus compelled to confine their ministrations to the graver or more interesting cases. Last year this arrangement was modified, and twice the number of surgeons and physicians were appointed to the staffs. At a meeting of the Municipal Council, where this question has been ardently discussed, some members wished to have a larger staff, with subdivisions in treatment—i.e., special wards for the eye, the throat, gynæcological purposes, &c.—but the expense was considered too high. It is remarkable that all these, and for that matter other, hospitals in Berlin are not used for purposes of teaching, which is confined to the Royal Charité and the University clinics. As the number of students in Berlin increases every year practical study of disease becomes more and more difficult, and it is hoped that all the hospitals will be opened to students.

Jan. 16th.

ROYAL METEOROLOGICAL SOCIETY.—The annual meeting of this society was held on Wednesday evening, the 16th inst., at the Institution of Civil Engineers, Great George-street, S.W., Mr. R. Inwards, F.R.A.S., President, in the chair. Mr. Inwards, in his presidential address, dealt with the subject of Weather Fallacies, which he treated under the heads of Saints' Day fallacies, sun and moon fallacies, and those concerning animals and plants. He also referred to the almanac makers, weather prophets, and impostors who have from time to time furnished the world with fit materials for its credence or its ridicule.

AT a special meeting of the board of management of the Chelsea Hospital for Women held on Wednesday, the 16th inst., the following appointments were unanimously made to the medical staff:—Physicians to in-patients: Wm. Duncan, F.R.C.S., M.R.C.P., M.D.; and W. H. Fenton, M.D., M.A. Surgeon to in-patients: Robert O'Callaghan, F.R.C.S.I. Physicians to out-patients: J. Inglis Parsons, M.D., M.R.C.P., M.R.C.S.; A. E. Giles, M.D., B.Sc., M.R.C.P.; and T. W. Eden, M.D., C.M., M.R.C.P. Pathologist: E. J. Maclean, M.D., C.M. Registrar: G. H. A. C. Berkeley, M.B., B.C., M.R.C.S.

THE INDIAN MEDICAL CONGRESS.

THE SECTIONS.

MEDICINE AND PATHOLOGY.

DEC. 24TH, 1894.

Presidential Address on the Fevers of India.

SURGEON-LIEUTENANT-COLONEL ALEXANDER CROMBIE, M.D., delivered his presidential address on the Fevers of India. He said:—"The fevers of India divide themselves into two great classes or groups. In the first of these are those fevers whose course is interrupted by more or less perfect periods of apyrexia, and are, roughly speaking, amenable to treatment by quinine. These are the malarial fevers. In the second group are the continued fevers, in which quinine is of no avail. With regard to the first our knowledge is precise and almost complete; with regard to the second it is still hazy and to a large extent conjectural, and yet it is in this second group that are found the fevers the fatal character of which goes so far to swell the death-rate of India to its huge proportions. I will speak first of the fevers in which periodicity is the distinguishing character—namely, the malarial fevers. With regard to intermittent fevers we are all of one mind, and there is no question, and can be no question, as to their position; but of late years there has arisen a good deal of doubt as to whether there is any specific fever which can be called remittent, and, if so, whether it should be included among malarial fevers. I confess myself among the sceptics.

"Beginning, then, with those fevers which in their normal or typical manifestations have distinct periods of perfect apyrexia—namely, the intermittent fevers—I would point out in the first place that they do not in India follow the same order of frequency as they do in other malarial countries. In those parts of India in which I have had opportunities of observation quotidian ague takes the first place in order of frequency. At most seasons I would not probably be wrong in saying that 90 per cent. of the cases of ague we have to treat have daily paroxysms of fever, and not more than 10 per cent. are tertian in type, while quartan ague is so rare that it may be practically left out of account. I have only had to treat one case of quartan ague in the whole of my twenty-two years' service in India, though I heard of another case a few weeks ago, but was unable to see it. In other malarial countries the order of frequency is quite different. In the Roman Campagna, for instance, the majority of the cases are tertian, then come quartan, and last of all quotidian agues. To this fact, the comparative infrequency of tertian and quartan ague, I attribute the reluctance which is still shown in some quarters in India to accept the amœba of Laveran as the true pathological cause of the symptoms of malarial fever, because in quotidian ague the amœba is often difficult to find, for the reason of its small size, its often indistinct form, and because it does not go through all the phases of its cyclical life in the blood of the general circulation. In tertian, and specially in quartan, ague it is of large size, well pigmented, and generally requires no great search to find it, and in quartan ague its whole life history can be followed in blood taken at intervals from the finger. To study the most critical part of the cyclical life of the parasite in tertian and quotidian ague—namely, the periods of segmentation and sporulation—blood must be taken from the internal organs. From these remarks you will guess, and I may as well at once confess, that I am a convert to the amœbic theory of malarial fever. It seems to me that it is impossible to offer any longer a reasonable resistance to this theory. Malarial fever is found to exist in widely different parts of the world—in America, Africa, Asia, and Europe—and in localities differing from each other in every particular of climate. Yet under all these varying conditions the phenomena of malarial fever are identical and point to an identical pathological cause. In all these places an examination of the blood of patients exhibiting these symptoms discloses the presence of a living organism which is the same in each place, the same in Africa and America as in Bombay and Calcutta; furthermore, the cyclical growth and development of the parasite are found to correspond with the cyclical periodicity of the fever, the apyrexia corresponding with the appearance of the young amœbæ in the corpuscles and the accession of fever with their sporulation and the discharge of their presumed toxine into the blood. If it is to Laveran we owe the discovery of the relation of the amœba to malarial fever, it is to Italian physicians—and especially to Golgi, Marchiafava, and Bignami—that we owe the working out of its life history, and it seems to me impossible to resist their conclusions. Golgi has made quartan ague his special study, and the ease with which the life of the amœba of that form of ague can be studied in the blood of the finger makes it very enticing. Its cycle of life is shortly as follows, and I am glad to have this opportunity of saying that I was able, even with my very imperfect observations, here in Calcutta, to confirm those of Golgi and Marchiafava, as far as I could do so in the single case of quartan ague which came under my observation last year. On the first day of the apyrexia the amœba will be found, perhaps, two or even three in a single field of the microscope as in my case, occupying about three-quarters or one-fifth of the invaded red blood corpuscles and exhibiting active amœbic movements. On the second day of apyrexia it will be found that it has grown so as to occupy half of the blood corpuscle, to have become pigmented at the periphery, and to have all but lost its motility. On the third day of apyrexia it will be found to occupy nearly the whole of the corpuscle, and that the pigment has collected towards the centre preparatory to segmentation. The next and last stage of the cycle of life is that of sporulation, and with the discharge of the spores, and the toxine which the amœba is supposed to form, comes the sudden accession of fever on the fourth day. When this happens over and over again, the same relationship being repeated between the growth maturation of the amœba and the periods of apyrexia and pyrexia in the patient, it becomes irresistibly borne in on one that they bear an intimate and, indeed, causal relationship to each other. The study is more difficult in tertian and most difficult in quotidian ague, because the amœbæ of these forms of ague cannot always be found in the blood of the finger, retiring as they do to the spleen, brain, and bone marrow to undergo their final stages of segmentation and sporulation prior to a renewed accession of fever, and indeed it is sometimes only on post-mortem examination that the important part they played in the phenomena can be understood, the number of amœbæ in the general circulation not being always proportionate to the severity of the symptoms. All that is wanted to satisfy the most exacting demand for complete evidence that the amœba of Laveran is the very cause of intermittent fever is that it should be cultivated outside the body in some suitable medium, and that when a pure culture so obtained is injected into the body of an animal susceptible to the disease it should give rise to the symptoms and pathological changes of intermittent fever. Hitherto the amœbæ of malarial fever have baffled every attempt of this kind if it be not true, as was reported a few months ago, that Celli of Rome has succeeded in growing them in some alkaline medium. It would require a much more prolonged and continuous study than it has been in my power to give to this subject before I could say or ask you to believe, with Marchiafava, that each form of malarial fever has its own variety of the parasite, and that you can tell by its microscopic characters which variety is present and that the specimen of blood is taken from the finger of a patient suffering from quotidian, tertian, or quartan ague as the case may be; but it is my firm belief that there is little difficulty in doing so, and my own observations here in Calcutta, as far as they go, entirely confirm the observations of the great Italian observers, as may be gathered from the phrases I have used in speaking of the parasites of the different forms of intermittent fever, as if they were distinct. I have now seen every form of the amœba, both the endoglobular and the ectoglobular bodies belonging to the semilunar group, with the exception of the flagellate forms in patients in the General Hospital in Calcutta, and they exactly correspond with what I saw in Rome and is described and pictured in Marchiafava and Bignami's book; and not only so, but the variety described as that of quartan ague was found existing alone in my case of quartan ague I have alluded to. Here the commonest variety is the annular form found in our cases of quotidian ague, exactly like that found in cases of quotidian ague from the Roman Campagna, and the same correspondence will be found also, I believe, in the tertian ague of the two countries.

"I now pass to those cases of malarial fever in which there is no distinct intermission. These form an important proportion of the cases of fever treated under the name of remittent fever, and allow me to say at once that we all recognise two kinds of remittent fever—a malarial and a non-malarial form, which latter I, however, regard as a continued fever, and will consider later as one of the group of

continued fevers. But at a certain season of the year—that is, from the middle of September to the end of December—in Lower Bengal, at least, a very large percentage of cases of remittent fever partake of a different character—that is to say, they are clearly of a malarial nature, and are equally with the varieties of intermittent fevers mentioned before amenable to treatment with quinine. There is little room for doubt that this group of fevers, the malarial remittents, is also produced by the same amœba forms as produce the intermittent fevers, and that they are, in fact, intermittent fevers in which either the pyrexial stage is unduly prolonged, owing to the excessively toxic qualities of the organism, so that a new accession of fever comes on before the previous attack has entirely subsided, giving time only for a small remission of the pyrexia previous to the next accession; or they are cases in which there are at one and the same time two sets of organisms in the blood whose cycles of life are parallel but not synchronous, one maturing, sporulating, and discharging its toxine some eight, ten, or twelve hours after the other, thus keeping up a continuous condition of pyrexia. Just as there is a double tertian, so there may be, and in certain of the cases I refer to there is, a double quotidian, producing the phenomena which constitute what is described as malarial remittent fever. I have not made a sufficient number of observations to verify those of Marchiafava, who has found corroboration of this theory of malarial remittent fever in the existence of amœbæ in different stages of cyclical growth in the same drop of blood; but I have found the annular forms of the amœba present in cases of remittent fever in no way to be distinguished from those so constantly found in the quotidian form of intermittent. I confess, however, that these are most trying cases to investigate microscopically, at least in the time usually at my disposal for these purposes; and I have in most cases been obliged to form my diagnosis on general clinical symptoms. We must, therefore, in many cases fall back on general symptoms in differentiating the malarial from the non-malarial form of remittent fever, and the clinical features on which we must depend to justify the diagnosis of an element essentially malarial in these cases are the following: (*a*) the history of a distinctly intermittent character of the symptoms at an earlier stage before they become remittent in type; (*b*) the existence of a more or less distinct remission of the pyrexia at a fairly regular time of the day or night; or (*c*) the occurrence of two remissions, however slight, and two exacerbations in each period of twenty-four hours, suggesting the existence of two sets of organisms maturing separately. Observations of this nature require the most intelligent care and record, but when one or other or all of these phenomena are present you know that you are dealing with a case of malarial poisoning and you must exhibit the antidote even though no malarial organisms can be found in the blood of the finger. If when the time of my leaving India comes I were to leave a message to my professional brethren here it would be this—treat your cases of malarial remittent with quinine early, in full doses, with a free and fearless hand and regardless of the temperature. But while I yield to no one in my advocacy of the freest use of quinine in malaria, at the same time I deprecate and deplore that indiscriminate use of it in unsuitable cases which has brought this invaluable drug into so great disrepute among the natives of this country, and has given rise to a dread of it, both on the part of patient and practitioner, which effectually prevents its effective employment in cases where it is the only hope of salvation. In this instance, as in every other, a careful diagnosis is essential. If after a painstaking inquiry the case appears to be one of the second group of which I am about to speak, the group of continued fevers, withhold quinine or give it sparingly and tentatively; but if you come to the conclusion that the case is malarial you cannot give it too freely or fearlessly, or with too lavish a hand.

"I now come to the second group of fevers, our knowledge of which, with perhaps one exception, is unfortunately still vague and conjectural, and in which quinine is not only of no avail, but is sometimes distinctly harmful. I refer to the continued fevers, of which I recognise with certainty three, and probably five, as specifically distinct. The three whose differentiation I regard as indisputable are simple continued fever, typhoid fever, and non-malarial remittent, so called; of the other two, whose title to a distinctive name you may be disposed to doubt, one is a fever especially of towns, known locally as 'Calcutta fever,' 'Bombay fever,' &c., which runs a course very similar to that of typhoid fever without any of the symptoms of that disease; and, lastly, there is a low continued elevation of temperature of indefinite duration and without any distinctive symptomatic features, and known simply as 'low fever.'

"Many cases wrongly returned as 'ague' are really cases of 'simple continued fever.' If, instead of determining within a week, the fever, as is not very unusual, especially during the cold season and early summer, continues for a longer time, we look for defervescence about the fourteenth, twenty-first, or twenty-eight day. These cases are particularly common in towns and are known as 'Calcutta fever,' 'Bombay fever,' &c., and it is open to anyone to assert that they are cases of mild typhoid fever, and that those which recover early are merely abortive cases of that disease. But I am one of those who are unable to admit that the whole philosophy of continued fever in India can be epitomised in the word 'typhoid.' I cannot admit that the bacillus of Eberth is the only organism capable of giving rise to a febrile curve of three or four weeks' duration."

[Here Surgeon-Lieutenant-Colonel Crombie went carefully into the diagnostic points of enteric fever. He continued:]

"I maintain that we are not justified in designating as typhoid fever cases which have neither the gradual initial rise, nor the eruption, nor the characteristic stools, whether loose and like pea-soup or constipated and like yellow coach paint, cases in which the tongue continues clean and moist or simply coated as in any febrile condition, and in which the mind is clear throughout unless you give quinine. I say we are not justified in calling such cases, in which all the symptoms of typhoid fever are absent, enteric fever simply because they have a duration of three or four weeks. I demand that some one or more of the ordinary symptoms of typhoid fever should also be presented. Neither will I admit that even hæmorrhage from the bowel necessarily removes them to that category if it be true that other febrile infections besides that of typhoid fever may also give rise to intestinal ulceration. I believe that the cases which I am now describing, and which are so sharply differentiated from typhoid fever by the whole clinical picture which they present, constitute a specific disease and must have a specific and separate cause distinct from the bacillus of Eberth.

"A very few words will suffice to dispose of the next form of continued fever. It is one which is only occasionally met with among Europeans, and I do not think I have met with it in natives of India; but if it does occur among them it would hardly be brought under my notice. I refer to a persistent low elevation of temperature unaccompanied by any constant symptoms, of indefinite duration, and uninfluenced either by quinine or arsenic. The temperature never falls below 99° and rarely rises above 101·5° F. It may continue for several weeks without complication, except perhaps a tendency to diarrhœa of a bilious character, with loss of appetite and gradual loss of strength and flesh. Some of these cases are distinctly aggravated by quinine, and I have known them to cease abruptly on withdrawing the drug, which had been persistently given in the belief that the condition was malarial in its essential nature. These cases are spoken of as 'low fever,' and are generally cured by a 'change' of any kind, but especially by a trip to the sea; and it is especially this form of fever which in Calcutta is benefited by a visit to the Sandheads. Though very ill defined, these cases contain a distinct type of fever at once recognised when met with.

"Widely different from this 'low fever' is the last form of continued fever of which I have to speak—namely, the non-malarial remittent (so called). It is a pity we have no better name for this fever, which is of very frequent occurrence, and is one of the most fatal of our fevers. The designation 'remittent' is a misnomer. It is no more remittent—and, indeed, is often less so—than typhoid fever. The temperature is generally very high, touching 104° and 105° for a long part of its course, the daily fluctuation not exceeding 2° or 2·5°. It begins in a way not unlike the cases I have described under the names of 'Calcutta fever,' 'Bombay fever,' &c., and is by some considered to be a variety of typhoid fever notwithstanding its divergence from all the symptoms of that disease. Hepatic enlargement and congestion are early and constant conditions, but the spleen as a rule continues impalpable below the ribs. Bilious diarrhœa, in no respect resembling the diarrhœa of typhoid fever, is also a very frequent symptom. Quinine often given in large and repeated doses in these cases is not only not useful, but so obviously adds to the distress of the patient, without in any way producing an improvement

in the progress of the symptoms, that it is very soon abandoned. Meanwhile, the temperature continuing persistently high, marked head symptoms, especially delirium of a muttering and irritable kind, comes on, and the patient may even, and often does, pass into a condition of coma from which he can hardly be roused. This condition, one of persistent high temperature without any marked remission, a distinctly enlarged and congested liver with bilious diarrhœa, congestion of the back of both lungs, and a low muttering delirum, is generally reached by the eighteenth to the twenty-fourth day. If coma supervenes the patient frequently dies about this period. In more favourable cases where the symptoms are less severe they continue for a week or two more, and the average duration of the case is six weeks. None of our drugs seem to be of any use in shortening it, certainly not quinine, the inadequacy of which in these cases has now become fully recogni-ed, though the disease has not yet found a name or place in our nomenclature."

[Surgeon-Lieutenant-Colonel Crombie concluded with an eloquent appeal to his medical hearers not to allow France and Germany to remain in the van of bacteriological research, but to make a more careful clinical study of the cases which came daily under their observation in India, the enormous field for clinical study in which he had worked.]

PROCEEDINGS IN SECTION.

DEC. 26TH, 1894.

THE following are abstracts of papers read at the Congress:—

A Case of Lymphadenoma (Hodgkin's Disease) in a Native.

Dr. J. CHAYTOR WHITE read a paper under the above title. He said: "The comparative rarity of this disease in the native of India is my apology for bringing a case before the Congress, it being the first I have seen in this country. The patient, a man aged thirty-six years, a native of this district, was admitted into the Mozuffarnagar Dispensary on July 19th, 1894, suffering from a series of multiple enlargements of all the superficial lymphatic glands of the body. He first noticed a swelling in his armpits a year ago, and in the following October the inguinal glands on both sides became affected. About three weeks ago he noticed swellings under the jaw and around the neck, when deglutition became difficult and his health bad. He had not suffered from syphilis. On examination it was evident that every palpable group of lymphatic glands was affected. The cervical chains were all enlarged, but had not become aggregated. The submaxillary, sublingual, and parotid glands of both sides were greatly enlarged and conglomerate. The adenoid tissue of the pharynx and fauces was involved, and the tonsils when palpated felt like almonds. The voice was hoarse and there was difficulty in deglutition, but the recurrent laryngeal was not paralysed by pressure. The thyroid was much enlarged, and the mediastinal glands were also manifestly involved. The mesenteric glands were easily felt on palpation, and from the enlarged retroperitoneal and lumbar glands of the left side there was a copious discharge of lymph, which found exit at the bottom of the abdomen above Poupart's ligament. There was no evidence of change in the thymus, nor was there any caseation or suppuration in any one of the enlarged glands. The spleen was considerably increased in size, smooth on the surface, and could be felt well below the ribs. The urine was normal. The blood was found to be distinctly deficient in red cells, which were only about 53 per cent. of the normal. Leukæmia was marked, there being an excess of white cells in the proportion of about 1 white to 75 red. The red cells were also poor in hæmoglobin, it being estimated at about 45 per cent. of the normal. On staining a specimen after Ehrlich's method with eosine and logwood the eosinophile corpuscle was not found to be present. The temperature throughout the case under notice was of the curiously characteristic hectic type. It never exceeded 102° F. and never quite touched the normal curve. No febrifuges were administered for its control. I gave thyroid gland tabloids a trial, but with absolutely negative results."

The Possible Antagonism between Malaria and Phthisis.

Mr. ARDASEER DOSSABHOY COOPER, M.R.C.S. Eng., &c., read a paper on the Possible Antagonism between Malaria and Phthisis. He commenced with a reference to the small amount of attention that had been given to this subject, notwithstanding its importance, and then continued: "As late as 1811 it was put forth by Wells that malaria and phthisis were opposed to each other, and he cited many authorities in support of his views. In 1841 Harrison of Horncastle remarked on the infrequency of phthisis in the fens. These views were revived in 1856 by M. Bedouine, who held that malaria and phthisis were opposed to each other. He formulated his views under three heads: '(*a*) that where malarial endemic fevers are prevalent phthisis is rare, and that the frequency of one class of cases is inversely proportionate to that of the other; (*b*) that where malaria decreases phthisis increases; and (*c*) that phthisis is more curable in malarious regions than in others.' Writing on this subject, the late Dr. Peacock instanced six cases in which phthisical patients under his treatment were found to be suffering from ague, thus leading him to reject the idea of there being any material antagonism between the two maladies; but he was careful to add that 'the facts do not, however, warrant the denial of the supposition altogether, and there are probably few popular ideas which have not some foundation in truth.' It has been observed by Professor Virchow that fever prevailed to a frightful extent in Silesia, where nearly everyone had enlarged spleen, but he hardly ever saw a case of phthisis, and he was borne out in this observation by all the medical practitioners in the country. Numerous American observers, as Dr. Green and others, advance views supporting the antagonism. Dr. Green has remarked that not a single case of phthisis was to be seen in his district, where paludal fevers were very common, and he observes that phthisical patients coming to the locality were much benefited and found 'relief as decided as it was permanent.' He mentions that when a morass near Rutland was converted into a pool fevers were replaced by phthisis, and on the reconversion of the pool into a morass intermittent fevers reappeared. A French writer, M. Jurdanet, in a book published in 1861, mentioned two provinces, Yucatan and Tabasco. In Tabasco fevers are very common and phthisis is rare, whereas in Yucatan the reverse holds good, and the fact is so well known and appreciated that persons suffering from phthisis are ordered to Tabasco by their medical advisers. Dr. R W. Felkin, Lecturer on the Diseases of the Tropics in the Edinburgh School of Medicine, in his travels through Central Africa, where he had exceptional and varied opportunities of observing the prevalence of malaria and phthisis, seems to have come across very few cases of phthisis, and even these corresponded in a very remarkable manner with the absence of malaria. In the swampy districts of Unyoro and Uganda he met with but few cases of phthisis. The same was his experience in his journey from Khartoum to the Albert Lake along the Valley of the Nile. However, while returning he saw a large number of cases in the district of Shuli at an altitude of from 3000 to 4000 feet, where malaria is rare. Throughout this paper no mention whatever has been made of India, where both the diseases are found. I will not venture to determine whether the malarious parts of India are absolutely or comparatively free from phthisis, and whether the malarious localities are more favourable residences for phthisical patients."

The Prophylaxis of Malarial Fevers.

Surgeon-Major N. DUNCAN, M.D., B.S., F.R.C.S., read a paper on the Prophylaxis of Malarial Fevers, in which he said: "I propose, with regard to the prophylaxis of malarial fevers, to offer, first, a short *résumé* of the opinions of medical officers of our own and other countries; and, secondly, to narrate the results of my own experience, restricting myself to the question of preventive drugs. Amongst the French physicians, M. Corré holds it still unproved that the practice of keeping the system under the influence of drugs intended to kill the malarial organism is beneficial. M. Kelsch and M. Kiener state that the officers of the French marine favour the exhibition of quinine. Coming now to the Italian physicians notable results have been obtained by Tommasi Crudeli. This physician experimented with other drugs than quinine. In 1880 he began to try the effect of arsenic with encouraging results. Dr. Ricchi in 1883 tested its action in the case of 78 persons in the district of Borino, where malaria is very rife: of the 39 who took it 36 escaped entirely, while the 3 remaining had only slight attacks; of the 39 who did not take it the great majority had severe attacks of fever. Again, in 1885 657 persons were experimented upon. Of these, 402 gave good results, 119 pretty good, whilst the effect was indifferent in 136. Tommasi Crudeli also speaks highly of a decoction of lemon. Such, therefore, have been the results obtained by our Continental brethren. With regard to America, we have the experience derived from the War of the Secession. Surgeon Bryan

found quinine and cinchona to be sure prophylactics; but in all cases the experience of this war did not show that the indiscriminate use of quinine as a prophylactic was necessary. Coming now to our own countrymen, Bryson reported excellently on the prophylactic effects of quinine. On the West Coast of Africa, on the Gambia, Harvey found, however, no good results to occur. The blue-jackets who took quinine daily had as much fever as the men who did not. The late Surgeon-Major Parke, ten days before entering the mouth of the Congo, gave the officers four grains of quinine three times a day. There were only two cases of slight intermittent fever, although 350 miles of the most unhealthy region were passed through. No other white man had previously travelled the same country with the same immunity. My late friend, Dr. Ralph Leslie, whilst acting as Government medical officer in the Congo Free State, gave a protracted administration of arsenic by interrupting it during fifteen days every six weeks. Everyone who had gone regularly through the treatment was preserved from severe attacks of fever. Dr. Crosse of the Niger Company has again had favourable results from the exhibition of quinine. At Peshawur, in 1866, during the autumn the different corps were divided into wings, the men in one wing having five grains every evening, the men in the other having none. From Sept. 1st to Nov. 30th 1203 men took quinine, the admissions into hospital for malarial fever being 10 22 per cent.; 1202 men who took no quinine had an admission rate of 27 23 per cent. for fever. There is, however, evidence of a contrary kind. Sir Anthony Home did not consider quinine thus given to have any value. In the Malay War, again, a daily issue of three grains was ordered. The Goorkhas did not receive the ration, and yet they suffered only very slightly more than the Buffs, who took it; but among the Buffs the malarial fever which did attack the corps appeared one month at least after they had been regularly taking it. I will conclude my paper with a brief *résumé* of my own experience. The men from whom my results have been obtained are Sikhs and Goorkhas. The drugs I have given have been quinine, quinetum, cinchona febrifuge, cinchonidine, sulphur, arsenic, and atees. Atees, I found on inquiry from my hospital assistant, was a favourite drug among the native community for ague. With regard to arsenic, I have found no benefit to follow its use. During 1836 and 1837 I placed the men of the regiment I was serving with on a prophylactic ration of arsenic during the months most liable to malarial fever. In 1836 four companies of the 23rd Pioneers were ordered arsenic, commencing with five minims twice a day, finally taking ten minims of the liquor three times a day. From August to December there were fifty-four cases of malarial fever in all. In the companies taking arsenic twenty-eight cases occurred; in the companies not taking it twenty-six. In 1837 the men of the 14th Sikhs were subjected to a similar treatment from Sept. 20th to Nov. 16th. The right wing took six minims of the liquor twice daily, the left none; the right wing had eight cases of ague, the left nine. In 1889, whilst in charge of the 14th Sikhs at Peshawur, the regiment having suffered to an unusual extent from malarial fever during the preceding year at Jhelum, I again tried the prophylactic effect of arsenious acid from Aug. 16th to Oct. 30th. Here, again, arsenic had no prophylactic effect; if anything, the companies not taking it were rather freer from malarial fever. Thus the malarial fevers in India are either not so amenable to prophylaxis by arsenic as those of Italy, or else the form in which the preparation was given was the cause. Tommasi Crudeli does not recommend the liquid preparation of arsenic, but gives the drug in the solid form in gelatine tablets. With regard to quinetum, the results are not sufficient to draw any conclusion from. Turning now to the effects of quinine and cinchona febrifuge, A and B Companies from Aug. 2nd to Oct. 31st took respectively three grains, increasing in the last week to five grains, of quinine and cinchona febrifuge. Up to the week ending Oct. 10th, when E, F, G, and H Companies took quinetum, the results were:—

A Company,	taking quinine,	10	cases of malarial fever.
B Company,	taking cinchona febrifuge,	11	" "
E Company,	taking no drug,	24	" "
F Company,		18	" "
G Company,		21	" "
H Company,		13	" "

Here we see, therefore, a decided prophylactic effect was exercised. Finally, coming to the results obtained during the year 1894 amongst the 1-3rd Goorkha Rifles with quinine, cinchonidine, sulphur, arsenic, and atees, I regret to say that I have none of any value to offer. The result of my experience is, then, that of all the drugs named quinine and cinchona febrifuge are the only ones that have exercised any influence."

The Macro-Pathology of Constitutional Malaria, with Special Reference to its Treatment by Alkaline Saline Mineral Waters.

Surgeon-Major L. T. YOUNG, M.D., I.M.S., in his paper under the above title, said: "Before discussing the use of alkaline salines in the treatment of malaria it will be necessary to very briefly consider the pathological condition produced by malaria and their functional effects. Even a rather casual inspection at numerous necropsies will, I think, lead to the adoption of the opinion that malaria congests the internal organs and causes catarrh of the mucous membranes. A proper recognition of these two facts and their results may be considered the key to the successful treatment of the constitutional effects of malaria. Is it not rare at an Indian necropsy to find a liver free from congestion of some form or other? In many instances the appearances are distinctly those of incipient 'nutmeg' congestion, whilst in advanced malarial cases there is distinct cirrhosis of a hypertrophic kind, following to some extent as the result of long-standing congestion, according to the well-known pathological law. This cirrhosis is not the ordinary 'hob-nailed,' contracted surface form, but the enlarged, hypertrophic, morocco-leather surface form, which commences in and around the bile-ducts, and which, I venture to suggest, begins as a catarrh of these channels in a manner similar to that in which catarrhal malarial enteritis supervenes on tropical intestinal catarrh. Tropical hepatic congestion is always associated with more or less fatty infiltration of the liver cells. The acute results comprise hepatitis, abscess, perihepatitis, dysentery, catarrh of the bile-ducts, &c. The chronic results embrace the various forms of imperfect proteid metabolism or liver indigestion, also gout, rheumatism, and possible diabetes, &c. The early congested and the late cirrhotic stages of the spleen are only too well known. The organ or its capsule sometimes becomes inflamed; the enlargement of the organ may reach an enormous size, sufficient to almost fill the entire abdomen. In the later stages ascites supervenes, anæmia and debility, with a tendency to sudden death from pulmonary thrombosis, as so ably described by Sir Joseph Fayrer. These kidneys are nearly always found congested, often intensely so. Of the later stages, the large white kidney has been the most frequent result of my own observations, not the cirrhotic form as one would have expected. Acute desquamative nephritis is not a rare complication of severe malarial fevers, and it is often in the slighter degrees overlooked, and gradually assumes the fatal chronic form. The dietetic errors to which Anglo-Indians as a class are so much addicted are also largely to blame for many cases of Bright's disease. All the mucous membranes of the body become sooner or later affected by catarrh from malaria and residence in a tropical climate. Pharyngeal and laryngeal catarrhs are generally the earliest to occur. The latter spreads with great frequency up the Eustachian tube, giving rise to otitis media, which often goes on to suppuration with loss of the membrana tympani and ossicles, or to plastic inflammation sealing up the ossicles into the fenestræ and so causing deafness. The Schneiderian membrane shares the same fate, and hyperplasia of it over the turbinated bones is a common result. Slight chronic ophthalmia attacks the conjunctivæ. The lining of the uterus becomes endometritic. The most important catarrh, however, is that of the stomach and intestines. Under the influence of repeated 'long drinks,' large meals, and hot weather the stomach becomes dilated, its glandular structures degenerate and atrophy, leading to the secretion of gastric juice imperfect in quality. You may, perhaps, have observed that an ague patient who has had a drink of milk half an hour previously brings it up perfectly uncurdled, showing the complete absence of acid from his stomach. The thickly loaded, large, flabby, indented 'tropical tongue' is a frequent sign of tropical gastric catarrh. The intestinal catarrh often causes, not alone obstructive jaundice, but ramifies and extends along the bile passages in its more chronic forms. This, as I have already suggested, may act as the starting point of biliary cirrhosis. Catarrhal enteritis is a common and extremely fatal consequence of extension of intestinal catarrh to the substance of the intestine from its mucous membrane, and its occurrence is favoured by the mechanical obstruction to the return of blood from the chylopoietic viscera by a chronically congested liver. This enteritis is not a sthenic form of

inflammation accompanied by the exudation of lymph, nor does it usually excite the overlying peritoneum to effusive inflammation. The bowel—usually found pale, thinned, and anæmic from malarial atrophy—is, when enteric, found darkly congested, thickened, and its mucous membrane soft and vividly injected. The peritoneal side of the bowel is also red and injected. Long tracts of the bowel are not affected in this intense manner, but only patches of a foot or two. The spaces between these present all the signs of chronic congestion or of incipient inflammation, with signs of vascular dilatation and blood stasis. The congestion is usually most marked about the ileum. There is no trace of any ulceration of Peyer's patches or of the mucous membrane. A patient who recently died at the Umbala Hospital from this affection had grass-green diarrhœa, just like a child with irritative diarrhœa. The colour of the motions in diarrhœa is mostly either pale or dark. I have not often seen it green in adults. Malarial degeneration or atrophy of the heart also occurs in advanced cases. This organ is found pale, thin, small, and flabby. The ventricular walls are reduced to about half their normal thickness. There are atrophy and fatty degeneration of the muscular tissue. Severe and long-continued malarial fevers often produce paresis or paralysis, motor or sensory, or both, of the lower limbs. This was found to be due to spinal pachymeningitis. We next come to the question of how the above conditions may be ameliorated, removed, or prevented by alkaline saline mineral waters. Of these the chief are those of Neuenahar, Carlsbad, and Marienbad."

[Surgeon-Major Young here described the composition and action of Carlsbad water, both natural and artificial. He then continued :]

"Patients must be prepared to devote two hours each morning to drinking the water in the proper manner. On getting up in the morning a dose of six ounces and a half of the natural or artificial water made from the salts and warmed to a temperature of 120° F. should be slowly sipped as it cools down. After this a walk of twenty minutes in the open air is taken, and then another six-ounces-and-a-half dose; a second walk of twenty minutes, and a third similar dose are next indulged in. This is followed by a walk of one hour, after which the patient can have a simple breakfast. Some patients are given an extra dose of the water at 11 A.M. and another on going to bed at night. This latter has a great effect in cleaning the thickly furred 'tropical tongue.' During the course the following articles of diet are strictly excluded : fresh fruit, salads, acids, cheese, tinned, dried or smoked fish, and butter. Sweets, greasy dishes, and strong wines or short drinks are also to be avoided."

Typhus Fever in Hoti Mardan and in Beluchistan.

SALVATOR ALOYSIUS PISANI, M.D. Edin., Chief Government Medical Officer, Valetta, Malta, read a paper on the above subject, in which he said : "Typhus fever is no new disease in India. Anybody who has had occasion to refer to Dr. Bryden's Statistical Report, published in 1878, will, I think, feel convinced that some, at any rate, of the outbreaks described by him were instances of true typhus fever. The improved sanitary condition of our gaols in recent years has led to the disease being less frequently observed, to our forgetting the work of our predecessors, and to our doubting even the prevalence of typhus fever in India. I think that we have accumulated evidence to show that this disease is endemic in certain parts of India, where climatic conditions in some seasons of the year approach to those of European countries. In fact, we might call this an endemic area, and include in it the trans-Indus districts from Beluchistan to Eusufzai, the Hazara, and Rawalpindi districts, and the Himalayan hill tracts. The first of the two outbreaks which I will bring to your notice occurred in the magistrate's lock-up at Hoti Mardan in the Peshawur district during the months of April, May, and June, 1888. During the month of May and in June I had an opportunity of observing seven cases of typhus fever among the prisoners, and two cases among the constables who had formed part of the guard over the sick prisoners at the Mardan Dispensary.

"Case 1 : The patient was admitted to hospital on the seventh day of illness. When seen on the morning of the eighth day there was commencing rash over abdomen, delirious; eleventh day, rash extensive over side of chest and abdomen, semi-conscious; fourteenth day, temperature normal, rash dark purple; fifteenth day, rash still present; I have no note when rash disappeared; eighteenth day, conscious for first time; twentieth day of illness appeared deaf; twenty-third, still deaf; constipation throughout.—Case 2 : Seen on eighth day, was then delirious, semi-comatose; slight commencing rash; eleventh day, rash evident, but scanty on side of abdomen and chest of purple colour; fourteenth day, temperature normal; fifteenth day, rash disappeared; seventeenth to twentieth day, troubled by vomiting; twenty-second day, apparently deaf; constipation throughout.—Case 3 : Seen sixth day; seventh day, two suspicious spots on abdomen, no delirium; thirteenth day, evidence of pneumonia; fourteenth day, spots petechial; sixteenth, delirium, abdomen distended, hiccough; seventeenth, temperature normal.—Case 4 : Seen fifth day; eleventh day, slight delirium; twelfth day more delirious, semi-conscious; thirteenth day, purple mottling over abdomen and chest; fourteenth day, temperature normal, offensive black stool; fifteenth day, delirious; sixteenth day, no delirium; eighteenth day, some petechiæ visible; twenty-first day, deaf.—Case 5 : Seen on second day; rash commenced on sixth day; was well marked by tenth day, slightly delirious; on thirteenth day, unconscious; on fifteenth day, temperature normal; on eighteenth day, deaf.—Case 6 : Seen first day; rash commenced on ninth day; eleventh day, delirious, semi-conscious, macular purple rash, extensive over side of abdomen, over chest, and extending over the arms; fourteenth day, pneumonia, rash still present; nineteenth day, temperature normal.—Case 7 : Police constable on guard over sick; seen first day, suspicious-looking spots; on fourth day, soon disappeared; sixth day, epistaxis; no note of delirium; temperature normal fourteenth day.—Case 8 : Seen first day, signs of rash; on fifth day, still present; on eighth day, scanty; no note of delirium; temperature normal fourteenth day.—Case 9 : Police constable seen sixth day; had been on duty over sick and been relieved; when first seen he was covered with a macular purple rash; this rash was so extensive that it extended pretty nearly all over the body, except his face; at first of a bright purple, it became gradually darker; he was delirious, semi-conscious; this man died on the tenth day of his illness.

"In the brief notes that I have given the pyrexia in the non-fatal cases lasted from the fourteenth to the nineteenth day; it was of a continued type throughout; the fever was accompanied by a distinct measly purple rash, very extensive in Cases 6 and 9, evident in Cases 1 and 5, and in Case 3 when the mottling subsided, scanty in Cases 2 and 3, and practically absent in Case 7. The rash commenced in one case on the fifth day, in one on the sixth day, in one on the seventh day, and in one on the ninth day. In all these cases there was an opportunity of observing the patients previously to the days mentioned. In three cases the rash was present when the patients were first seen—one on the sixth and two on the eighth day. In the case where mottling was noted it appears to have occurred unusually late—namely, thirteenth day; at any rate, I have no notes of its being visible before this date. Delirium of a low kind was present in seven out of the nine cases, accompanied in many of the cases by great prostration and more or less unconsciousness. In two cases there was pneumonia, occurring on the thirteenth or fourteenth day of the disease, and in every other case there were more or less signs of bronchitis. Sir George Buchanan, in his article on Typhus Fever in 'Reynolds' System of Medicine,' says that 'symptoms referable to the respiratory system are so common and so important that they must be regarded as essential parts of the disease.' In every case, both in this outbreak and in the cases I shall relate presently, the frequency of these respiratory complications constituted an additional danger to the disease. Constipation was a prominent feature in most cases; marked tympanites was present in three cases; troublesome vomiting during convalescence in one case. In four cases there was marked deafness, lasting for some time during convalescence; and in the case of the constable, where there was no rash, there was epistaxis on the sixth day, about the period a rash would be expected. To prove the contagiousness of this fever we have (1) the evidence that two constables on guard over the prisoners contracted the disease, one dying; (2) the importation of the disease to the Peshawur Gaol. It was due to some prisoners suffering from fever having been transferred from the Mardan lock-up on April 28th to Peshawur that led the civil authorities, at the request of the Inspector-General of Prisons, Punjab, to ask me to inquire into the sickness prevailing at the lock-up. I reported the disease to be typhus fever on June 2nd, 1888. At the time that the sickness commenced in the lock-up, and for some time before, there had been considerable overcrowding; the barracks were very badly ventilated, the only means of ventilation being through the grated doors; in addition, the barracks themselves were in a very insanitary condition. As typhus fever is endemic in the Peshawur district and the history of the earlier cases is not obtainable, the origin of the outbreak could not be traced. The second group of cases that I will notice occurred among the coolies working in the Khojak tunnel in Beluchistan. Evidence of a very fatal contagious disease was obtainable from the excessive mortality among the hospital establishment. In 1890, out of a strength of nine seven died. In the first seven months of 1891, out of a strength of ten four died. The cases which I found prevailing after my arrival on April 19th were cases of relapsing fever, a few cases of typhus fever, and some which

did not present any characteristic features. The seven cases of typhus fever which I saw occurred, like the Hoti Mardan cases, in the months of April, May, and June.

"Case 1: Admitted April 23rd; sixth day seen; on seventh day lying on back groaning and prostrate. Sordes on lips, purple rash not raised over abdomen and lower and front part of chest; bronchitis both lungs, spleen tender; eighth day delirious; tenth delirium, now of active character; thirteenth delirium, active signs of pneumonia; sixteenth day temperature normal, complained of cardiac pain, getting more prostrate; died seventeenth day. Post-mortem examination, rash still faintly marked, signs of double pneumonia, pericarditis and meningitis, enlarged spleen and liver, temperature irregular.—Case 2: Hospital dresser taken ill; admitted April 21st; 23rd kept in his room, informed of his illness; ninth day he was covered with a very copious and a very marked measly rash, present over chest and sides of abdomen, and some on thighs and arms; on eleventh day crepitant rales, both lungs resonance, impaired; thirteenth day delirious, tongue protruded with difficulty, rash getting darker; fifteenth day, prostrate, during the night had epileptic convulsion and died; rash present after death.—Case 3: Assistant Surgeon taken ill; April 28th, irregular temperature, rash appeared; eighth day, slightly raised at first, signs of bronchitis; on eleventh day the following note of the rash was made—it is dark purple, situated at sides of abdomen, the lower part of the sides and a few in front of chest; a few spots on flexor surface of the forearms, delirium began late; on eighteenth day had lobular pneumonia and laryngitis, temperature normal; twenty-second day, delirious up to twenty-fifth day; rash practically disappeared on eighteenth day.—Case 4: Admitted twelfth day of illness; seen on thirteenth day, very prostrate, breath foul, can scarcely protrude his tongue, intellect dull, passing motions in bed, purple rash over chest and abdomen accompanied by mottling, bronchial rales back of both lungs, resonance not clear; temperature normal fifteenth day; sixteenth day, rash and mottling disappeared.—Case 5: Admitted sixth day of illness, rash present, purplish red; eighth day rash darker, disappearing on pressure, cough; tenth day, very drowsy, sordes on teeth, cannot protrude tongue; eleventh, passing watery motions in bed, prostration marked, bronchial rales; twelfth day, delirious, temperature normal; sixteenth day, convalescent, rash faintly seen.—Case 6: A recent arrival at Khojah seen from first day; fourth day, sign of spots of reddish colour over front and sides of chest, abdomen, and back not elevated; fifth day, bronchitis; sixth day, rash, now well marked and of a purple colour, disappearing on pressure; eighth, rash does not disappear on pressure; fourteenth day, temperature normal, rash hazy; twenty-sixth day, rash very faintly visible, no delirium.—Case 7: No clear history of illness; admitted June 12th, very dull; tongue dry, brown, and black, in centre reddish-purple, rash and mottling over chest and sides of abdomen, and flexor surface of forearms; June 13th, vomited; June 14th, vomited six times; 15th, delirious at times, rash dark purple, does not disappear on pressure; June 18th, temperature normal, rash disappearing; 19th, rash nearly gone.

"Some of these cases were not typical; but I think there was no doubt of the nature of the disease."

DEC. 27TH, 1894.

On the Prevalence of the Ankylostomum Duodenale in Madras.

Surgeon-Captain C. H. WILLIAMS, M.D., in a paper under the above title, remarked:—"Of the last fifty post-mortem examinations I have made in the General Hospital, Madras (that is, since March last), in which the small intestine has been examined, this parasite has been found in twenty-six, or 52 per cent. The diseases of which the twenty-six hosts died were as follows:—Diseases of the abdomen: cirrhosis of the liver, 4; dysentery, 3; perforation of stomach, 2; cancer of stomach, 1; pancreatic abscess, 1; diarrhœa with ulcers in large intestine, 1; tuberculous peritonitis, 1; suppurative nephritis, 1; cystitis and pyelitis, 1. Diseases of the chest: lobular pneumonia, 2; pyo-pneumothorax, 1; mitral stenosis, 1. Diseases of the head: cerebral thrombosis, 1. General diseases: traumatic tetanus, 2; malarial fever, 2; starvation, 1; ankylostomiasis, 1. Besides these twenty six cases eight were returned as ankylostomiasis by the physicians in charge of the wards, one being the case included above; and of these six were discharged cured and one relieved. As regards the nationality of the twenty-six hosts, twenty-three returned themselves as Hindus, one each as Eurasian, Native Christian, and Pariah. Two of the Hindus were Nayars from the West Coast, the rest were the ordinary Tamil coolie class, drawn chiefly from the neighbourhood of Madras, but partly from the whole Presidency, many coming long distances. The actual figures are: five born and bred in Madras, nine who had been from some weeks to a few years there, eleven who came from other parts of the Presidency direct to the hospital, and one (a beggar) who had probably been all over the district. This shows that the parasite exists both in the Presidency town and widely throughout the Presidency. The ages of these patients varied from sixteen to seventy, the average being thirty-six. The hospital admits as in-patients only males over twelve years of age, and no statistics are therefore available for women and children. The cases are returned as ankylostomiasis in which the eggs of the worm are found in the fæces in great abundance, and no other cause is evident for the very marked anæmia from which they suffer. Usually they give a history of an anæmia increasing for one or two years, with, in some cases, but not in all, a febrile onset of a few days, and usually some discomfort, doubtless duodenal, referred to the epigastrium. Of organic changes produced by this parasite I have found none certain, but in two cases changes which I was inclined to attribute to them. One was in a case which died from perforation of the small intestine high up. The perforation had taken place through a cicatricial mass, not much indurated, encircling the bowel; and the duodenum and first few feet of the ileum were found to be the seat of eleven circular cicatrices, some as much as two inches long, and most unusual in appearance. I thought, and still think, these were due to the bites of ankylostomata at some previous time which had ulcerated and cicatrised. If not, I do not know to what they were due. The case is recorded in the Transactions of the Madras and South Indian Branch of the British Medical Association for this year, a plate accompanying it. The man was not markedly anæmic at the time of death, but a few ankylostoma were present. No good history could be obtained, as he was moribund on admission. The other supposedly organic changes were a considerable cirrhosis of the pancreas, a certain amount of interstitial nephritis, and a doubtful interstitial change in the liver found post mortem in the case of ankylostomiasis. This might possibly have been produced by long-continued reflex irritation, though I am far from asserting that it was. As to the members in which these parasites are found, they are as a rule not many; but usually where they are present some bites are visible on the duodenal mucosa. Females, as usual, much predominate. The conclusion to be drawn from this is that, whereas the parasite is very commonly present among the poor natives who come to this hospital, any actual disease worthy the name of ankylostomiasis and produced by them is rare."

Radical Cure of Chronic Dysentery in its Recurrent Form.

Dr. HENRY GALLAY took the above title as his subject, and said:—"These cases show that it is possible, without much difficulty by setting aside all the therapeutic substances which are to be absorbed by the stomach, and, notwithstanding, allowing the sick persons to feed themselves as they like, to cure old chronic dysenteries, especially when this disease is assuming the form which is called 'repeating form'; and this result can be obtained simply by performing a daily and continuous series of washings of the large intestine with a solution, of which the following is the formula: nitrate of silver crystallised, 1 scruple; distilled water, 1 litre.

"Case 1: Dr. G——, a medical officer, in 1888, while residing in Tonquin, contracted acute dysentery, and during four years he had fourteen relapses of the same disease, in spite of all our known suitable treatment. After the eleventh relapse Dr. G—— tried the washing of the large intestine with the above solution. Several series of ten washings each resulted at each time in a period of apparent recovery, lasting from forty to fifty days, and finally Dr. G—— decided to begin an indefinite series of washings, which resulted in a definite cure in August, 1892, maintained in September, 1894.—Case 2: Mr. X——, revenue officer at Saigon, had suffered for two years from dysentery in repeating form. He had tried every sort of treatment. At Bordeaux, in June, 1892, he underwent a series of twenty washings, and then wrote to me saying that he had never been so well. In reply, I advised him to repeat the series. Since I left France I have not heard from him; but what I have learnt from experience permits me to conclude that he did not require any more aid from me.—Case 3: Miss D——, fourteen years of age, an Indian Eurasian, had dysentery in April, 1892, and was relieved in fifteen days, but afterwards suffered from constant uncontrollable stools in the morning and frequent indigestion, which gave rise to ejection of mucus and bloody matter, with tenesmus. September, 1892: series of twenty washings, complete amelioration. The series was kept up by way of precaution to the fiftieth washing. September, 1894: the cure has been confirmed since.—Case 4: Mr. D——, colonial functionary, had contracted dysentery at Hué in May, 1889. Notwithstanding twice returning to France and the use of the waters of Bassang he was always suffering and was subject every moment to relapses. He lost 24 lb. in weight. In January, 1893, he began a series of sixty washings—result, complete amelioration. In July, 1894, two years later, Mr. D—— left Pondicherry, always progressing and having regained his weight.—Case 5: Miss X——, eighteen years of age, Eurasian, had in 1891 dysentery at Hyderabad, after which period she never passed two months without a relapse. In May, 1891, series of washings up to fifty only. Perfect amelioration. I heard of her a year later and the cure was maintained.—Case 6: Rev. Father ——, missionary in Tanjore, contracted dysentery in 1890. Afterwards he constantly had constipation, alternating with mucous diarrhœa and tenesmus. A series of sixty washings resulted in a complete cure. He was able to resume his hard work in 1892, and to-day (September, 1894) he came to show himself to me, and he was stout, fresh and vigorous.—Case 7: Mr. ——, Controller of the Revenue Accounts at Pondicherry, had acute dysentery in 1888, followed by constant relapses. In July and August, 1893, he underwent a series of fifty-six washings, with immediate relief, maintained now in September, 1894.—Case 8: Mrs. E——, twenty-one years, Eurasian, had dysentery in repeating form at the age of fifteen, was very weak and chlorotic. In October, 1893, she began a series of

fifty washings, and complete cure followed ten. In June, 1894, she went away to Europe strong and fat, bearing without difficulty the commencement of pregnancy.

"I have, on my own account, shortened the clinical description of the above cases, the details being the same for each of them. I must now indicate the way of proceeding methodically with the antiseptic washings of the large intestine, as this is important, and the final success or failure may depend exclusively on good and rational application. A first enema of tepid water washes as completely as possible the large intestine. After evacuating this the antiseptic washing should be applied, adding to it 20 or 30 minims of laudanum. This ought to be retained for two or three minutes, five being the maximum. One litre at least of liquid is indispensable when the treatment is for an adult. I always advise patients to use the washing in the morning, as soon as they awake, as, if they feel any cramps, they can go back again at once to the pleasant warmth of the bed they have just left, for cramps sometimes make this treatment difficult. I always recommend the treatment to be continued till the sixtieth washing, and that has on every occasion been enough. I have been guided in these remarks throughout by the personal result of a long series of washings which I myself took, which were interrupted only by my departure to India. My full recovery has been an unexpected result to myself, and remains the inciting example I can always offer to those suffering from chronic dysentery, who, more or less, are disheartened and sceptical regarding new modes of treatment. He who has followed my example has never been deceived; and, guided by a hope of being of service to a large number of sufferers, I have made this attempt to inform colonial medical men the results I have obtained in so tenacious an affection as repeating dysentery by a method of treatment which, in my hands, has shown itself to be as easily bearable as it is quickly effective."

Note on the Influence of Railways on the Dissemination of Cholera.

Surgeon-Major J. T. LEWTAS, M.D., read a paper on this subject. He said: "Any influence which railways may have in promoting the spread of cholera would be expected to show itself in one or both of the following ways: (1) by a more rapid extension of epidemics, as compared with those which occurred before railways were opened, the extension taking place especially along lines of the railway which pass through centres of the disease; and (2) by disproportionate prevalence of the disease in places lying on or near lines of railway. Do railways disseminate epidemics of cholera more rapidly? An examination of the history of epidemics of cholera both in India and Europe shows that railways have had little, if any, effect upon their progress. Obviously individual cases have been carried further than would have been possible before the introduction of railways; for example, a man may have imbibed cholera poison just before taking his seat in a train, and may travel 200 miles or more before symptoms are developed, whereas before the days of railways he would not have gone further than ten or fifteen miles in a bullock cart. But such cases as this do not appear to affect the subsequent course of the epidemic; they neither accelerate its progress nor determine its direction. During recent epidemics of cholera in Europe it frequently happened that individuals travelled considerable distances by rail from the place at which they had received the infection before the disease showed itself in them, but that no other case occurred in the towns or villages where they eventually either died or recovered. To quote an instance in India: At Meerut, in 1869, a sepoy was removed moribund from a railway carriage and was carried to the lines of the 36th Native Infantry Regiment before he died. But no other case occurred amongst the native troops at Meerut until a fortnight later, when the advancing epidemic reached that place.[1] Again, on April 14th, 1893, five men attacked with cholera were removed from a train at Saharanpur. Three of these died, but no epidemic ensued in Saharanpur. Does epidemic cholera in its advance specially follow lines of railway? The history of epidemic cholera in India does not show that the disease advances along lines of railway rather than by other roads. Sometimes, on the contrary, a line of railway remains outside although close to an epidemic area. The map of the epidemic of 1869 is a very striking illustration of this. The disease that year attacked Allahabad on March 21st, advanced slowly to Delhi, keeping almost exclusively to the south and west of the railroad, until at Delhi it left the line altogether and travelled to Lahore by way of Hansi and Hissar, parallel to, but distant 100 miles from, the line. The country between Meerut and Amritsar, 250 miles in length, although traversed daily by trains, remained absolutely exempt from the disease. It is a fact, be the explanation what it may, that during the epidemic of 1869 there existed a large area of country extending from Shajehanpur to Amritsar, 400 miles in length, traversed by every means of communication, and in which Hurdwar itself is included, which, nevertheless, was free from cholera, which was prevalent in adjoining districts. Other similar instances are to be found in the bewildering pile of literature which has grown up regarding cholera in India, and in voluminous reports in the United States. I have arrived at the following conclusions. 1. Railways convey patients suffering from cholera to places which they would not have reached in the days before railways were opened, but such cases do not by themselves determine, or even appreciably influence, the course of the epidemic. 2. Railways are a great safeguard to those who use them in order to escape from an infected locality; and as they constitute the quickest means of removing a large collection of people from any place in which cholera has appeared their influence, so far as these people are concerned, is eminently salutary, and the consequent introduction of some cases of cholera to previously non-infected places is dangerous only in so far as the sanitation of these may be defective. This statement is based not only upon the records of Indian experience, but also upon those of the European epidemics of 1884 and 1885. In a supplement to the Fifteenth Annual Report of the Local Government Board, p. 107, the following passages occur. 'The experience of cholera in England justifies a belief that the presence of imported cases of the disease at various spots in the country will not be capable of causing much injury to the population if the places receiving infection have had the advantage of proper sanitary administration.' Again: 'Cholera in England shows itself so little contagious that if reasonable care be taken where it is present, there is almost no risk that it will spread to persons who nurse and otherwise closely attend upon the sick.' One more extract from the same report: 'Thus, when a case of cholera is imported into any place the disease is not likely to spread, unless in proportion as it finds locally open to it certain facilities for spreading by indirect infection.' These and other references in this paper to European and American experience are not, I venture to think, irrelevant, because they show that those who have had especially favourable opportunities of observing cholera there have arrived at conclusions which agree with our experience of the disease in India."

Infectious Pneumonia.

Surgeon-Major DUNCAN, M.D., in his paper on Infectious Pneumonia, considered the nature of an epidemic of pneumonia which fell under his observation ten years ago. He said: "On Nov. 25th, 1885, the 23rd Pioneers arrived at Umbala from the Pishin Valley. From Nov. 25th, 1885, to April 26th, 1886, thirty-three cases of pneumonia occurred. By months they were thus distributed: four in November, nine in December, five in January, five in February, five in March, and five in April. Many surmises as to the cause of the affection were made: 1. That the regiment was inadequately clothed and that the men caught cold. Now the regiment was, in fact, one of the best clothed in the Native Army. In addition to their ordinary dress each man had been provided with a thick sailor's jersey. 2. It was held that the regiment had returned from Pishin broken down in health. The following was the daily admission rate for the regiment from 1881 to 1886: in 1881, 39·65 per 1000; in 1882, 37·29 per 1000; in 1883, 22·53 per 1000; in 1884, 18·55 per 1000; in 1885, 31·41 per 1000; and in 1886, 19·62 per 1000. At first sight the admission rate for 1885 seems greatly in excess of that for 1883 and 1884, but a more minute examination showed the following facts: the great bulk of the regiment was in the Hurnai Pass up to April 18th; from April 18th to Nov. 16th the regiment was in the Pishin Valley; and from the latter date it travelled to Umballa, reaching this place on Nov. 26th. Now the rate of the headquarters admission from Jan. 1st to April 18th was 25·74; from April 18th to Nov. 26th, 19·21; and from Nov. 27th to Dec. 31st, 39·40. Hence the large bulk of admissions occurred after the regiment had returned from Pishin, whilst in Pishin the admissions were only slightly in advance of those of the preceding year. Thirdly, a white fog that prevailed in the lines in January was held in some way to

[1] See Dr. Bryden's report upon the cholera epidemic of 1869, page 53.

have caused the disease, much in the same way as a yellow fog was evoked to account for the cholera by some authorities in Egypt in 1883. Unfortunately, however, for this idea, the pneumonia continued when the white fog had disappeared, much in the same way as cholera has appeared when there has been no yellow fog. Fourthly, it might have been due to the cold from December to February. Cold, however, could not have caused the cases later. The temperature was taken in my hospital three times daily. Not to prove wearisome with the tables I will merely state the temperature found at noon. In March it rose from 71° to 80°; in April from 75° to 94°. As cases still continued to come into hospital, I determined to treat them as infectious. Under my advice the lines were evacuated and the men placed under canvas. The lines were then disinfected with sulphurous acid gas for six hours, every aperture being closed up, and on the day following the fumigation they were freely ventilated. On the third day the lines were reoccupied. By April 14th all the lines with the exception of those of the band had been disinfected. On April 14th case thirty-one, that of a musician, occurred. On the 15th the band went into tents. Two cases subsequently occurred on April 18th in the married lines; one on April 26th in the band lines. Both these cases occurred nine days after the lines were reoccupied, or eleven days after they had been evacuated for disinfection. But if pneumonia be a specific infectious fever it will have a period of incubation. This period, it may be not too much to assume, may be as long as eleven days, and thus the disease may have been contracted before the lines were disinfected. This theory receives support from the fact that during the same months measles had been present in the married lines. Now, subsequent to the disinfection three cases of measles occurred—two on April 17th in lines disinfected on the 13th and the third within a week from the disinfection. The incubation period of measles is stated to range from seven to twenty-one days; hence it is probable that all these cases were beginning as regards incubation before the lines were disinfected."

Surgeon-Major DUNCAN then briefly put forward his detailed reasons for considering the cases to have been epidemic and infectious in their nature, and not merely of local inflammation. He pointed out that if the affection had been merely a local one, on the return of the normal temperature the lungs would have been found to have quickly cleared up. He considered that the idea that cold especially predisposed to pneumonia was conclusively proved to be erroneous by Dr. Sanders of America. In a paper published in the *American Journal of the Medical Sciences* for July, 1882, he showed the disease to be more frequently met with and more common in warm than in cold climates, and in hot than in warm climates, showing a gradually increasing ratio from the Poles to the Equator, and that pneumonia, other things being equal, increases uniformly in frequency the nearer we approach the tropics.

Carlsbad and its Thermal Waters for Anglo-Indians.

Surgeon-General Sir J. FAYRER, M.D., F.R.S., contributed a paper on this subject. After exhaustively reviewing it from all the ordinary points of view, telluric, geographical, thermometrical and hygienic (we regret that space prevents us from printing the paper in full), Sir Joseph Fayrer noticed the conditions for which Carlsbad is likely to be useful to Anglo-Indians. He said: "The waters are indicated in the following disorders. In congestion and functional derangement of the liver, in catarrhal jaundice, in gall-stones or inspissated bile, and in chronic hepatic enlargement in which serious structural change of the amyloid or other degenerative processes have not taken place; in chronic engorgement of the portal system, in catarrhal conditions of the mucous membrane of the intestines and congestion of the hæmorrhoidal vessels; also in habitual constipation, incipient hæmorrhoids, and even in the earlier stages of tropical diarrhœa; in diseases of the spleen, such as chronic hyperæmia and enlargement, resulting from malarial poisoning; in chronic gastric catarrh, in cardialgia or gastralgia, dyspepsia, dilatation of the stomach; in those forms of albuminuria which take place as the result of abdominal plethora and changes in the blood due to malarial poisoning; in renal and vesical gravel; in lithiasis; also in chronic catarrh of the bladder and in hyperæmia of the prostate gland, and in some hyperæmic conditions of the uterus and its appendages; in all conditions in which the gouty diathesis manifests itself, and in general abdominal plethora and in obesity, whether of the abdomen or of the body generally. In the earlier forms of diabetes there seems little doubt, from the testimony of eminent authorities, that benefit may be derived. But Carlsbad is to be especially recommended to those who, after protracted residence in India or other malarial climate, suffer from occasional recurrences of malarial fever, with consequent derangement of function and even alteration in the normal condition of the liver, spleen, and other abdominal viscera, who, without suffering from any positive disease, are failing in health, have impaired digestion, a distended condition of the abdomen, increasing fatty deposit in the omentum, and a tendency to fatty degeneration of the muscular system generally; who find themselves languid and depressed, unequal to much physical or mental exertion, show indications of incipient anæmia, suffer from dyspnœa, from rheumatic or gouty pains, irregular action of the bowels, congestion of the portal system, and distended hæmorrhoidal vessels—a state of things perhaps in some cases aggravated by excesses or irregularities of diet or the neglect of due precautions as to the quantity or kind of alcoholic stimulants. Such are the conditions in which an early recourse to Carlsbad and a judicious selection of some intermediate health resort before returning to the ordinary mode of life are likely to confer benefit. Indeed, almost every European not the subject of organic disease who has spent many years in India would do well to avail himself of the resources of Carlsbad before he enters upon the new course of life which lies before him, whether he be returning to India from furlough or retiring to spend the remainder of his life at home."

THE GRIEVANCES OF POLICE SURGEONS.

ON Thursday morning last a deputation from the United Kingdom Police Surgeons' Association was received by the Home Secretary, Mr. Asquith, having for its object to urge upon him the necessity for some reform (1) in regard to the inadequacy of the remuneration allowed to medical witnesses attending sessions from a distance; (2) in regard to the rules for the examination of accused persons in cases of criminal assault; (3) in regard to the suitability of appointing police surgeons throughout the country where none exist; and (4) in regard to the examination of cases where death may have been due to poison, violence, or criminal neglect.

The following gentlemen formed the deputation:—Mr. Holmes, London; Mr. Bond, London; Mr. Lowndes, Liverpool; Mr. H. Nelson Hardy, London; Mr. Heslop, Manchester; Mr. Hopkins, Bath; Dr. Brown, Bristol; Mr. Stephens, Brighton; Dr. Maybury, Portsmouth; Mr. Houchin, London; Mr. Roberts, London; Dr. Grosvenor, London; Mr. Scatliff, Margate; and Mr. Mitchell Roocroft, Wigan.

Mr. H. NELSON HARDY introduced the deputation, referring to the many letters which had appeared in THE LANCET and other medical journals on the subject, and the following gentlemen addressed the Home Secretary: Mr. Bond, Mr. Lowndes, Mr. Holmes, Mr. Hopkins, Mr. Heslop, Dr. Brown, Dr. Maybury, and Mr. Roocroft.

Mr. ASQUITH, in reply, said: With reference to the question of examination in cases of criminal assault it would be desirable that a circular should be issued from the Home Office calling attention to the rules already in force for the guidance of the Metropolitan Police, and pointing out to the various Watch Committees the expediency of issuing the same or similar regulations to their own courts. With regard to the fourth point, he thought police surgeons were the proper persons, and likely to be more competent than medical officers of health, to carry out these duties, but the matter did not quite come within the jurisdiction of the Home Office. The question of remuneration was no doubt an important one. The scale for remuneration of witnesses was fixed in 1858. He did not wish to say that this was a just scale, but the fact that it substantially remained the same as when first fixed showed that the various Home Secretaries since that time had not cared to burn their fingers by altering it. He entirely agreed that the scale of one guinea was inadequate, but the same might be said for every single item of the whole scale as applied to most witnesses. He did not say that the case of medical witnesses was not a harder one, but each individual should require his

own employers (such as the Watch Committee, &c.) to make some provision to supplement the inadequate payment. He would be very glad to see the police authorities of the country recognise this. As to the lack in some important counties and boroughs of recognised, accessible, and generally known practitioners, not only for attendance on the force, but for cases where expert services were required, he would consider whether it was not desirable to call attention in a circular to the need of attaching to every police force some recognised police surgeon.

Mr. BOND having thanked Mr. Asquith, the deputation withdrew.

Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.—The following gentlemen passed the First Examination of the Board, in the subjects indicated, at the quarterly meeting of the Examiners under the four years' regulations:—

Part I., Chemistry and Physics:

Battiscombe, Eric George, London Hospital.
Boulton, Thomas, Owens College, Manchester.
Broughton, Louis Charles Southall, Mason College, Birmingham.
Griffiths, David Roger Thomas, Guy's Hospital.
Iliffe, Caris William, Owens College, Manchester.
Oldham, Sam Drayton, Owens College, Manchester.
Rooth, James Augustus, St. George's Hospital.
Watkins, Alan Percival, Cambridge University and University College Hospital.

Part II., Materia Medica and Pharmacy:

Bascombe, Edwin Cecil Dare, Middlesex Hospital.
Betts, Edward Hetley, St. Bartholomew's Hospital.
Broughton, Louis Charles Southall, Mason College, Birmingham.
Chambers, John Miles, St. Thomas's Hospital.
Cheese, John William, University College, London.
Chevallier, Claude Lionel, St. Thomas's Hospital.
Clements, John Hall, Mason College, Birmingham.
Collyer, Bertram Joseph, St. Bartholomew's Hospital.
Cooper, Edward Harold, London Hospital.
Curtis, Percy James, Guy's Hospital.
Davies, Thomas Stanley, St. George's Hospital.
Distin, Ernest John, King's College, London.
Eastman, Julius Daniel, Owens College, Manchester.
Eastment, Alan Grant, Middlesex Hospital.
Ellery, Henry George, Queen's College, Cork, and Middlesex Hospital.
Evans, Alexander, St. Mungo's College, Glasgow.
Evans, Charles Robert, Guy's Hospital.
French, Louis Alex. Weatherhead, University College, London.
Goodridge, Walter Lisle Taylor, Guy's Hospital, Durham, and University College, London.
Hair, Alan, University College, London.
Hodges, George William Cecil, St. George's Hospital.
Johnson, Edward Stanley, St. Mary's Hospital.
Knox, Robert George, King's College, London.
MacWatters, John Courtenay, University College, Bristol.
Mason, Sydney Herbert, Mason College, Birmingham, and Guy's Hospital.
Mellish, John Stafford, St. George's Hospital.
Newman, Herbert Robert Cambridge, University College, Bristol.
Owen, John Griffith, Charing-cross Hospital.
Owen, Lanyon Edward, University College, London.
Parlett, Frank, private study.
Rivers, Walter Courtenay, Charing-cross Hospital.
Rogers, Reginald James, University College, Bristol.
Shaw, Kenneth Rodas Devaignes, Owens College, Manchester.
Smith, Julius Hodgetts, St. Thomas's Hospital.
Smith, Montague, Middlesex Hospital.
Stevenson, Walter Brodie, St. Mary's Hospital.
Sykes, John Lewis, London Hospital.
Thorpe, Robert Smith, Owens College, Manchester, and Guy's Hospital.
Tomkins, Arthur Kenelm Digby, Mason College, Birmingham.
Vines, Sidney Kendrick, Mason College, Birmingham.
Watton, Sydney Herbert, Owens College, Manchester.
Wills, Edward Chaning, University College, Bristol.
Woodman, William James, St. Mary's Hospital.

Part III., Elementary Anatomy and Elementary Physiology:

Allan, Herbert William, Cambridge University.
Anderson, Lewis Pemberton, University College, Liverpool, and Owens College, Manchester.
Atkinson, Frederick Cecil Edgar, St. George's Hospital.
Charlesworth, Edward Adams, Middlesex Hospital.
Denyer, Stanley Edward, Cambridge University.
Duncan, James Simpson, Westminster Hospital.
Garman, Joseph Marcus, London Hospital.
Gilmore, Arthur Ernest, Cambridge University.
Micklethwaite, John, Firth College, Sheffield.
Richardson, Joseph James Daly, Guy's Hospital.
Simms, Clifford Greville, Middlesex Hospital and Mr. Cooke's School of Anatomy and Physiology.
Spencer, William Northey, University College, Bristol.
Whittingham, Arthur Herbert, Cambridge University and St. Mary's Hospital.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentleman, having previously passed the necessary examinations, and having now attained the legal age of twenty-five years, was, at the quarterly meeting of the Council on Thursday, the 10th inst., admitted a Fellow of the College:—

Beddoe, David Morgan, L.R.C.P.Lond., Guy's Hospital; diploma of Member dated May 11th, 1893.

FOREIGN UNIVERSITY INTELLIGENCE.—*Gottingen:* The rank of Professor has been granted to Dr. Hildebrand, *privat-docent* in Surgery, to Dr. Droysen, *privat-docent* in Midwifery, and to Dr. Nicolaier, *privat-docent* in Medicine.—*Innsbruck:* Dr. Carl Mayer of Vienna has been appointed Extraordinary Professor of Neurology and Psychiatry.—*Marburg:* Dr. Buengner has been appointed Extraordinary Professor of Surgery.—*Vienna:* Professor Schnabel of Prague has been appointed Professor of Ophthalmology in succession to Professor Stellwag von Carion, retired. Dr. Emil Schüz of Prague has been recognised as *privat-docent* in Medicine. Great disappointment has been occasioned by the announcement that the Government have abandoned the plan of acquiring the Alser Barracks for the purpose of enlarging the General Hospital.

DINNER OF THE LARYNGOLOGICAL SOCIETY OF LONDON.—This society held its third annual meeting on Wednesday, 9th inst., and in the evening the members dined together at the Café Royal, Dr. Felix Semon, the President, being in the chair. Among the guests were Sir J. Russell Reynolds (President of the Royal College of Physicians of London), Sir William Mac Cormac, Sir George Johnson, Signor Manuel Garcia, and others. The toast of "The Guests" was acknowledged by Sir J. Russell Reynolds and Dr. Ord, who in return proposed "Success to the Laryngological Society," coupled with the name of its president. Sir George Johnson responded for "The Honorary Members." The health of Signor Manuel Garcia, the inventor of the laryngoscope, was drunk with the greatest enthusiasm, and Signor Garcia, now in his ninety-first year, replied in appropriate terms.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—At the ordinary monthly meeting of this society held on Jan. 8th, Dr. Samuel Johnston, President, in the chair, Dr. T. W. Hime introduced a discussion on Precautionary Measures for the Prevention of Tuberculosis. The importance of tuberculosis was insisted on because of its always being present, because of its great death-rate, and the number of persons it attacks, giving rise to prolonged illness and attacking adults. It has been estimated that one-seventh of the human race die from tuberculosis. In 1890 there were 68 000 deaths in England from tuberculosis, the mortality not being known owing to the actual number of cases being uncertain. That recovery from tuberculosis does take place is proved by the presence of cicatrices in the apices of lungs. The pathology of tuberculosis was briefly glanced at, its bacillary origin and its local origin being alluded to. The mortality from tuberculosis since 1854 has been steadily falling from 3·4 per 1000 to 2·4 per 1000 in 1890, although no special crusade has been directed against it beyond general sanitary improvements. In cases of phthisis the great danger arises from the expectoration becoming dry and being blown about as dust. To prevent this Dr. Hime advocated the use of portable spittoons. Handkerchiefs should be avoided, and if used should not be washed with other clothes. Public spittoons should be provided at railway stations and in concert-rooms. Cases of phthisis should not be treated in the wards of general hospitals; special hospitals for tuberculous cases should be provided. The public should be educated with regard to the importance of using spittoons, especially in schools, workshops, hotels, lodging houses, prisons, and barracks. Other measures which Dr. Hime recommended were the notification of cases of tuberculosis, the disinfection of infected houses, and the watering of streets before they were swept. In Belgium there was compulsory notification of tuberculosis in animals, and in Denmark £3000 a year were voted for carrying out experiments on animals affected with tuberculosis. In conclusion, Dr. Hime emphasised the fact that tuberculosis was not spread by vaccination. The paper was discussed by Drs. Johnston, Major, Goyder, Kerr, Mr. Horrocks, Drs. H. Bronner, Drury (Halifax), Bell, and T. C. Denby, and Dr. Hime replied.

LIVERPOOL MEDICAL INSTITUTION.—At the annual meeting of the institution held on Jan. 10th the following list of office-bearers, council, and pathological and microscopical committee was adopted; those marked thus (*) did not hold the same office last year. President: Chauncy Puzey, F.R.C.S. Vice-Presidents: C. G. Lee, M.R.C.S., J. W. Warburton, M.D., *W. Macfie Campbell, M.D., *G. G. Hamilton, F.R.C.S. Edin. Hon. Treasurer: A. Bernard, M.B. Hon. General Secretary: *R. S. Archer, M.D. Hon. Secretary to Ordinary Meetings: Charles H. Shears, M.R.C.S. Hon. Librarian: K. Grossmann, M.D. Council: T. R. Bradshaw, M.D., J. E. Gemmell, M.B., J. Middlemass Hunt, M.B., Rushton Parker, F.R.C.S., G. S. Stansfield, M.R.C.S., *H. G. Rawdon, F.R.C.S. Edin., *R. W. Murray, F.R.C.S., *W. T. Thomas, F.R.C.S., *A. H. Wilson, M.R.C.S., *Richard Williams, M.R.C.S., J.P., *R. J. Hamilton, M.R.C.S., and *F. C. Larkin, F.R.C.S. Auditors: *G. S. Stansfield, M.R.C.S., *William Crozier, M.R.C.P. Irel. Pathological and Microscopical Committee: J. H. Abram, M.D., F. H. Barendt, M.D., F.R.C.S., A. Barron, M.B., *Rubert Boyce, M.B., A. W. Campbell, M.D., T. B. Grimsdale, M.B., G. G. Hamilton, F.R.C.S. Ed., F. C. Larkin, F.R.C.S., J. R. Logan, M.B., R. W. Murray, F.R.C.S., Frank T. Paul, F.R.C.S., W. T. Thomas, F.R.C.S., and Joseph Wiglesworth, M.D.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Abeles, formerly a physician in Carlsbad and a writer on many chemical subjects of clinical interest, especially on the occurrence of sugar in the urine. He died in Vienna, where he was a recognised Lecturer in Internal Medicine.—Dr. Spitzer, who soon after graduating in Vienna was appointed Professor of Anatomy in Constantinople, where he had to organise the medical school, an undertaking which was fraught with numerous difficulties. He, however, succeeded in establishing the school and was appointed Director. He gained the confidence of the Sultan Abdul Medjid by curing him of a severe illness, and was appointed His Majesty's body physician. Of course, the Imperial favour brought with it a great deal of opposition and misrepresentation from his rivals, and he found matters becoming so unpleasant that he requested leave to retire from Constantinople, which he did in 1850. Some years later the Sultan appointed him Ottoman Agent in Naples, which post he held until His Majesty's death in 1861. Since that time he had occupied himself with literary and scientific work, living sometimes in Paris and sometimes in Vienna, where he died at the age of eighty-one.—Dr. Cozzi, Professor of Clinical Midwifery in the University of Pavia.—Dr. E. Bailly, formerly *professeur-agrégé* in the Paris faculty of medicine.—Dr. Sim, Professor of Medicine, Memphis Hospital College.—Dr. Otton Marshinovich Dannenberg, the oldest surgeon in the Russian army. He was born in 1807, and took his diploma as Medical Practitioner at Dorpat in 1831.

MANCHESTER MEDICAL SOCIETY.—The annual meeting was held on the 9th inst. in the society's reading-room at Owens College, Dr. Dixon Mann, the retiring president, being in the chair. The officers for the ensuing year were appointed, and Mr. F. A. Southam was elected president. His name is well known in Manchester, for his father was for many years a distinguished surgeon to the Royal Infirmary, and the son worthily holds a similar appointment. The report stated that the society had completed its sixtieth year and was in a satisfactory condition. "The number of members had increased, the finances were sound, the library was richer in medical literature and more patronised, and increasing interest was taken in the meetings." There are now 280 members, as compared with 268 at the end of 1893. Some changes were made in the laws, which have undergone revision, the most important being the reduction of the annual subscription from two guineas to one guinea. This will be a popular change, and extend the benefits of the society to a larger medical circle. It may be that the competition of the youthful but very prosperous Clinical Society has been felt as a stimulus, but the fact remains that membership of the two societies will now cost two guineas instead of three, and many will be glad to join both. The library now contains 31,230 volumes, in addition to a large number of pamphlets. Facilities are granted for the use of books to the students of medicine, and last year the number of volumes issued to them was 5851. The ordinary members have also made increased use of the library during the past year.

LITERARY INTELLIGENCE.—We have received the first number of a new medical monthly magazine, entitled *Clinical Sketches Illustrative of Medicine and Surgery*. The contents, if not quite fulfilling the promise of the title, are of an interesting and varied kind, prominent among them being four papers on Diphtheria, comprising an account of its bacteriological diagnosis and directions for the use of antitoxin serum. Illustrations of a finished and pictorial character are a special feature. Among these we may mention two views of Sidmouth and a full-page reproduction of Harvey's portrait preserved in the Royal College of Physicians, London. The paper is edited by Mr. Noble Smith, F.R.C.S. Edin., who is to be congratulated on his opening number. The publishers are Smith, Elder, and Co., 15, Waterloo-place, W.

BOURNEMOUTH MEDICAL SOCIETY.—At a meeting of this society held on Dec. 21st, 1894, Mr. Parkinson, President, in the chair, a resolution was passed expressing regret at the death of Dr. Bisset Hawkins, one of the honorary members. Dr. Andrew and Mr. Hale were elected honorary members, and Dr. Ringer and Dr. Fosbery ordinary members. Dr. Muspratt showed a case of Peculiar Skin Affection. On the radial side of the second phalanx of the left forefinger was a raised ring about as large as a sixpence. The history was that it had begun as a slight wart and had extended at the periphery, while the natural skin became restored in the centre. The patient was a healthy girl aged about twenty. It was not tender, and there was nothing in her occupation to account for it. Mr. F. Fred. Gardner showed a case of Deformity of the Scapula. Mr. Bernard Scott showed a patient in whom he had removed the internal semilunar cartilage from the knee. Mr. Mahomed read notes of a post-mortem examination in a case of Acute Dilatation of the Stomach, with short notes of the history. The affection arose during convalescence from pleuro-pneumonia and was rapidly fatal; the patient was a man twenty years of age. Mr. Mahomed gave a *résumé* of the literature on the subject and argued that excessive secretion was a factor in the disease besides the loss of muscular power in the stomach walls. He found that in all the recorded cases the history showed the existence of some primary disease in the vagus tract. Mr. Kemble read notes of a case of Convulsions occurring at four months and a half of pregnancy and accompanied by hemiplegia. There was no renal incompetency. The fits had been very persistent. Trinitrine was very efficacious in the first instance, but the fits recurred three weeks later and it then proved of no value. Bromides were then attended with success. The hemiplegia was transitory. Gestation was now proceeding without disturbance of health and had advanced to seven months. An adjourned discussion followed the presidential address on the Wants of the General Practitioner.

BOOKS ETC. RECEIVED.

BAILLIÈRE, TINDALL, & COX, King William-street, Strand, London.
A manual of Veterinary Therapeutics and Pharmacology. By E. Wallis Hoare, F.R.C.V.S. 1895. pp. 560. Price 10s. 6d.

CHATTO & WINDUS, Piccadilly, London.
Herbert Fry's Royal Guide to the London Charities. Edited by John Lane. Thirty-first Annual Edition. 1894. Price 1s. 6d.

KINGSTON, HY., High Holborn, London, and HIRSCHFELD, BROS, Fetter-lane, London.
The Rearing and Feeding of Children: a Practical Mother's Guide. By Thomas Dutton, M.D. Durh. 1895. pp. 198. Price 2s.

LANE, JOHN, Vigo-street, London, W.
Imagination in Dreams and their Study. By Fred. Greenwood. 1894. pp. 198.

LONGMANS, GREEN, & CO., London.
Essays on Rural Hygiene. By Geo. Vivian Poore, M.D., F.R.C.P. Second Edition. Illustrated. 1894. pp. 372. Price 6s. 6d.
Tables and Directions for the Qualitative Chemical Analysis of Moderately Complex Mixtures of Salts. By M. M. Pattison Muir, M.A. 1895. pp. 44. Price 1s. 6d.

RIVINGTON, PERCIVAL, & CO., King-street, Covent Garden, W.C.
Clinical Lectures and Essays on Rickets, Tuberculosis, Abdominal Tumours, and other Subjects. By Sir Wm. Jenner, Bart., G.C.B. 1895. pp. 329. Price 14s. net.

SCIENTIFIC PRESS, Strand, London, W.C.
Infant Feeding by Artificial Means. By S. H. Sadler. Illustrated. 1894. pp. 243. Price 5s.
Spinal Curvature and Awkward Deportment: their Causes and Prevention in Children. By Dr. G. Müller, Berlin. English edition edited by R. Greene, F.R.C.P. Edin. Illustrated. 1894. pp. 88. Price 2s. 6d.

TREAT, E. B., Cooper Union, New York.
A System of Legal Medicine. By A. McLane Hamilton, M.D., L. Godkin, and others. Illustrated. Vol. ii. 1894. pp. 738.

WILLIAMS & NORGATE, Henrietta-street, Covent Garden, London.
Leitfaden der Gerichtlichen Medicin. Von Dr. K. S. Seydel. 1895. pp. 296.
Monatsschrift für Geburtshülfe und Gynäkologie. Von Professor Dr. A. Martin und Professor Dr. M. Sänger. Januar, 1895. pp. 96.

Fires in London; printed by the Eastern Morning News Company, Whitefriargate, Hull.—Intestinal Anastomosis, with the report of a Case; by F. H. Wiggin, M.D.: reprint from New York Medical Journal, December, 1894 (D. Appleton & Co., New York).—The Report of the Committee of the Finsbury Dispensary for the Year 1893.—Cystic Goitre, with Cases in Practice; by A. B. Deynard, M.D., New York: reprint from the Medical and Surgical Reporter, June, 1893.—Surgical Treatment of Tumours of the Neck; by T. H. Manley, M.D., New York: reprint from the Medical Brief, St. Louis, N.B.—The Relation of Static Disturbances of the Abdominal Viscera to Displacements of the Pelvic Organs; by J. H. Kellogg, M.D. (Modern Medicine Publishing Company, Battle Creek, Michigan, 1894).—Diary for 1895: Sanitary Record (Rider & Son, Bartholomew-close, London). The Castle Line Atlas of South Africa (Donald Currie & Co., Fenchurch-street, London, E.C.).—On the Eccentricity of Youth Leading to Crime; by L. Forbes Winslow, M.B. Camb., M.R.C.P. Lond. (John Bale & Sons, Great Titchfield-street, London, W.); price 1s., 1895.—Abdominal Surgery on the Battle-field; by N. Senn, M.D.: reprint from St. Louis Clinique, June, 1894.—Medical Officers of Schools Association: The Treatment of the Exanthemata by so-called Antiseptic Inunction; by H. G. Armstrong, M.R.C.S. (J. & A. Churchill, London, 1894); price 1s.—Revue des Sciences Médicales en France et à l'Étranger, No. 89; 15 Janvier, 1895 (G. Masson, Paris).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, for publication in the next number.

BOGER, WM. H., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Fifth Sanitary District of the Liskeard Union.

BUTTS, STANLEY DE, M.D., has been appointed Anæsthetist to the Royal Ear Hospital.

DAIN, H. G., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Surgical Officer to the Children's Hospital, Birmingham, vice Hickinbotham, resigned.

DAY, W.A., L.R.C.P Edin., M.R.C.S., has been appointed Medical Officer for the Kirkleatham Sanitary District of the Guisborough Union.

FAIRFAX, H., L.S.A., has been appointed Medical Officer for the Thirteenth Sanitary District of the West Ham Union.

HAMMOND, WM., L.R.C.P., L.M., M.R.C.S., has been reappointed Medical Officer for the Sixth Sanitary District of the Liskeard Union.

HAYMAN, H. L., L.D.S., R.C.S., has been reappointed Honorary Dental Surgeon of the Clevedon Convalescent Home.

HICKINBOTHAM, J. R., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Children's Hospital, Birmingham, vice Whitehouse, resigned.

ILIFFE, W., F.R.C.S. Edin., L.F.P.S., L.M. Glasg., has been reappointed Honorary Medical Officer of the Kendal Provident Dispensary.

JACKSON, E. S., M.B., C.M. Edin., has been appointed, *pro tem.*, Medical Officer for the North Sanitary District of the Lancaster Union, vice Brownlow, deceased.

JACOB, E. L., M.R.C.S., has been appointed Medical Officer to the Chertsey Urban District Council.

MACNAB, ROBERT, M.D. Glasg., F.R.C.S. Edin., has been appointed Honorary Consulting Physician to the Suffolk General Hospital.

MACTIER, H. CARTER, M.B., B.Ch., B.A.O. Dublin, has been elected House Surgeon to the Eye Infirmary, Wolverhampton.

MARTIN, ROBERT, L.R.C.P. and S. Edin., L.S.P. and S. Edin., L.M., has been appointed Medical Attendant to the Royal Irish Constabulary, Gilford, vice J. M. Brown, resigned.

MATHSON, J. COLIN, M.B., C.M., has been appointed House Surgeon to the Royal Ear Hospital.

NIX, HERBERT W., B.A., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., late House Surgeon to St. Thomas's Hospital, London, has been appointed Government Resident Medical Officer, Marble Bar, Pilbarra Gold Field, Western Australia.

PARKER, W. R., M.D. Camb., M.R.C.S., L.M.R.C.P., L.M. Irel., has been reappointed Honorary Surgeon of the Kendal Provident Dispensary.

PARSONS, J., L.R.C.P., L.M., F.R.C.S. Edin., has been appointed Medical Officer for the Fourth Sanitary District of the Alton Union.

PATERSON, H. J., M.B., B.C. Camb., L.R.C.P. Lond., M.R.C.S., has been appointed Junior Assistant Anæsthetist to St. Bartholomew's Hospital, London, vice Buttar, resigned.

POOLE, W., M.B., B.C. Cantab., has been appointed Medical Officer to the British Central African Administration at Zomba, in the Shire Highlands, south of Lake Nyassa.

REES, D. V., L.R.C.P. Lond., M.R.C.S., has been appointed *pro tem.* Medical Officer for the Borough of Brecon.

RICHARDSON, W. G., M.B., B.S., F.R.C.S., has been appointed Surgical Registrar to the Royal Infirmary, Newcastle-upon-Tyne.

SHEPPARD, AMY, M.B. Lond., has been appointed Assistant Physician to the New Hospital for Women.

SKINNER, S., M.B., C.M. Aberd., M.R.C.S., has been reappointed Honorary Medical Officer of the Clevedon Convalescent Home.

STEPHENS, E., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Medical Officer for the Chard Rural Sanitary District.

STURRIDGE, P. F., L.R.C.P., L.M. Edin., M.R.C.S., has been reappointed Surgeon of the Kendal Provident Dispensary.

TAYLOR, B. R. A., M.R.C.S., has been reappointed Surgeon of the Kendal Provident Dispensary.

TUBBY, ALFRED HERBERT, M.S. Lond., F.R.C.S. Eng., has been appointed Assistant Surgeon to the Westminster Hospital.

TURNER, GEO., M.B. Camb., D.P.H., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Hoddesdon Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

CANCER HOSPITAL (Free), Fulham-road, S.W.—House Surgeon for six months. Salary at the rate of £50 per annum, with board and residence.

CENTRAL LONDON OPHTHALMIC HOSPITAL, 238A, Gray's-inn-road, W.C.—House Surgeon. Rooms, coals, and light provided.

GUEST HOSPITAL, Dudley.—Resident Medical Officer. Salary commencing at £100 per annum, increasing by £10 a year to £120 if services are satisfactory, with board, residence, and washing.

HOSPITAL FOR DISEASES OF THE THROAT, Golden-square, London, W.—Registrar and Pathologist for six months. An honorarium at the rate of 25 guineas a year.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Junior House Physician for six months. Board and lodging (including washing) provided.

PARISH OF RONSAY AND EGILSHAY, Orkney.—Resident Medical Officer. Salary £51 sterling per annum. Applications to Inspector of Poor, Ronsay, Orkney.

ROYAL SOUTH LONDON DISPENSARY.—Surgeon in Ordinary to visit patients at their own homes in the Waterloo District. Honorarium £20 per annum. Applications at the Dispensary, St. George's-cross, S.E.

SALFORD ROYAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board and residence.

SUFFOLK GENERAL HOSPITAL.—Honorary Assistant Medical Officer. Applications to the Secretary, Bury St. Edmunds.

UNIVERSITY OF EDINBURGH.—Additional Examiners for four years. Salary £75 per annum in each case, with an allowance of £10 per annum for travelling and other expenses in the case of an Additional Examiner not living in Edinburgh or the immediate neighbourhood. Applications to the Interim Secretary, University Court, University of Edinburgh.

WIRRAL CHILDREN'S HOSPITAL, Woodchurch-road, Birkenhead.—Resident House Surgeon (lady or gentleman). Salary £50 per annum, with board, lodging on the premises, and washing.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On Jan. 10th, at Church-street, Slough, the wife of E. Weaver Adams, F.R.C.S., D.P.H., of a son.

BRIND.—On Jan. 13th, at Warrenbayne, Ealing, W., the wife of H. Hanslow Brind, M.R.C.S., L.R.C.P., of a son.

BRYSON.—On Jan. 8th, at Osmaston-road, Derby, the wife of Leonard H. Bryson, M.B., of a son.

RICHARDS.—On Jan. 10th, at 47, Churnet-street, Collyhurst, Manchester, the wife of Arthur J. Richards, M.R.C.S., L.S.A., of a daughter.

STOCKEN.—On Jan. 16th, at Connaught-road, Harlesden, the wife of Arthur P. Stocken, L.D.S., of Endsleigh-gardens, N.W., of a son.

MARRIAGES.

CAIGER—ORR.—On Jan. 9th, at All Saints' Church, Notting-hill, by the Rev. C. E. Escreet, Rector of Woolwich, assisted by the Rev. Canon Trench, Vicar of All Saints', Frederick Foord Caiger, M.D. Lond., only son of F. H. Caiger, of 31, Arundel-gardens, W., to Madeline, youngest daughter of the late Alexander Orr, of Melbourne, Australia.

HEATON—BARNES.—On Jan. 15th, at St. Mary's, Harrow-on-the-Hill, Charles J. Heaton, M.D., M.R.C.S., L.R.C.P., second son of the late Mr. Clement Heaton, of Watford, to Mary Florence Barnes, second daughter of the late Mr. William Barnes, of Birkenhead.

HUDSON—VAUGHAN MORGAN.—On Jan. 9th, at St. Mary's, The Boltons, South Kensington, Charles Elliott Leopold Barton Hudson, F.R.C.S., of Harley-street, W., to Ethel Vaughan, daughter of Septimus Vaughan Morgan, of Harrington-gardens.

RENDLE—DARLEY.—On Jan. 16th, at St. Peter's, Belsize-park, C. E. Russel Rendle, B.A. Oxon., M.R.C.S., L.R.C.P., to Edith Mary, second daughter of J. J. Darley, 3, Lancaster-road, Belsize-park.

DEATHS.

HAKE.—On Jan. 11th, at the house of his brother, Acacia-road, N.W., Thomas Gordon Hake, M.D., in his 86th year.

HARMER.—On Jan. 14th, at Redlands, Tonbridge, William Milsted Harmer, F.R.C.P.E., aged 56.

MURRAY THOMSON.—On Jan. 13th, at Victoria-road, Gipsy-hill, Murray Thomson, M.D., F.R.S.E., Fell. Univ. Calcutta, late Professor, Experimental Science, Thomason C.E. College, Roorkee, India, aged 60.

RAWDON.—On Jan. 4th, at Sunnybank, Clifton, York, William Frederick Rawdon, M.D. Edin., of York, aged 91.

SMITH.—On Jan. 13th, at Blackfriars-road, Septimus William Smith, L.F.P.S. Glasg., of Sussex-square, Brighton, in his 53rd year.

N.B.—A fee of 2s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 17th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Maximum Temp Shade	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Jan. 11	29·87	N.E.	30	Frzn.	31	31	28	...	Overcast
,, 12	29·66	S.E.	27	Frzn.	45	37	26	...	Overcast
,, 13	28·95	S.W.	37	37	54	42	27	...	Cloudy
,, 14	28·94	S.	40	39	50	45	34	0·18	Raining
,, 15	29·09	S.E.	41	41	46	41	40	0·07	Raining
,, 16	29·03	S.W.	42	41	50	47	41	0·01	Cloudy
,, 17	29·07	S.W.	43	42	47	45	41	0·11	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynecological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), Gt. Northern Central (2.30 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North West London (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

MONDAY.—INCORPORATED SOCIETY OF MEDICAL OFFICERS OF HEALTH (20, Hanover-square, W.).—7.30 P.M. Ordinary Meeting. 8 P.M. Dr. Porter (Stockport): Preventable Infantile Mortality, especially in connexion with Factory Labour. Discussion.

SOCIETY OF ARTS.—8 P.M. Prof. Silvanus P. Thompson: The Arc Light. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Frederick T. Roberts: The Combinations of Morbid Conditions of the Chest. (First Lettsomian Lecture.)

TUESDAY.—ROYAL MEDICAL AND CHIRURGICAL SOCIETY (20, Hanover-square, W.).—Mr. A. W. Mayo Robson: Varieties of Intestinal Obstruction dependent on Gall-stones, with a series of cases.

SOCIETY OF ARTS.—4.30 P.M. Dr. A. Markoff: Russian Armenia and the Prospects for British Trade.

WEDNESDAY.—HUNTERIAN SOCIETY (London Institution).—8.30 P.M. Clinical Evening. Dr. F. J. Smith: Typhoid Fever treated by the Continuous Bath (Notes).—Sir Hugh R. Beevor: Pyo-nephrosis.—Mr. J. F. Woods: Chorea treated by Hypnotism (two cases).—Mr. J. Poland: (1) Excision of Isthmus of Thyroid Gland; (2) Intracapsular Fracture of Neck of Femur in a Boy.—Dr. Hingston Fox: A Tumour for Diagnosis.—Mr. Openshaw: (1) Congenital Sacral Tumour; (2) Congenital Defect in Clavicles.

SOCIETY OF ARTS.—8 P.M. Mr. A. G. Stanton: Tea.

FRIDAY.—CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. West: Two cases of Detachment of the Retina in the course of Granular Kidney. Dr. Felix Semon: A Novel Form of Malingering—Chronic Self-inflicted Ulceration of the Throat.—Dr. Pasteur: Cases illustrating the Association of Respiratory Paralysis with grave Cardio-pulmonary Symptoms in Diphtheritic Multiple Paralysis.—Dr. E. W. Goodall: An Unusual Form of Tracheal Diphtheria.—Dr. Lee Dickinson: A case of Malformation of the Heart with Hæmophilia.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

TUESDAY.—ROYAL INSTITUTION.—3 P.M. Prof. Charles Stewart: The Internal Framework of Plants and Animals (II.).

CENTRAL LONDON THROAT AND EAR HOSPITAL.—4.30 P.M. Dr. Dundas Grant: The Treatment of cases of Deafness without Pain or Discharge.

WEDNESDAY.—NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3 P.M. Lecture by Dr. Beevor.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-sq., W.C.).—5 P.M. Dr. Morgan Dockrell: Eczema.

THURSDAY.—ROYAL INSTITUTION.—3 P.M. Mr. W. S. Lilly: Four English Humourists of the Nineteenth Century (II.).

FRIDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 A.M. Dr. Barratt: The Pathology of the Skin.

ROYAL INSTITUTION.—9 P.M. Sir Colin Scott-Moncrieff: The Nile.

SATURDAY.—ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN (Leicester-square, W.C.).—11 to 1 P.M. Dr. Barratt: The Pathology of the Skin. 5 P.M. Dr. Morgan Dockrell: Syphilis.

ROYAL INSTITUTION.—3 P.M. Mr. Lewis F. Day: Stained Glass Windows and Painted Glass (II.).

Notes, Short Comments & Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

THE INDEX TO THE LANCET.

THE Index for the last half-year was published in our issue of Dec. 29th, which completed the second volume of the year 1894. Those of our subscribers who may wish to be supplied with loose copies can obtain the same (without extra charge) on making application to the Manager.

TESTIMONIALS TO TRADESMEN.

Edward C. Anderson, M.A., M.D. Cantab.—Our correspondent agrees with us as to the objectionableness of a testimonial he gave to a miller as to the quality of a certain kind of oatmeal, and explains to us that it was meant to be used only among others, and not separately. This condition has been disregarded by the miller, and Dr. Anderson has very properly withdrawn his permission for use of the testimonial in any form. He is to be commended for doing so.

Struggles.—Applications for the appointment of prison surgeon should be made to the Prison Commissioners at the Home Office, Whitehall, S.W. (the Secretary is Col. M. Clare Garsia), for English appointments, and candidates are selected on their merits. Medical officers in Scotland and Ireland are, we believe, appointed by the same department, but are under separate regulations. The Secretary for the Colonies, the Marquis of Ripon, appoints the surgeons and assistant surgeons to the convict prisons abroad. The secretaries of the different Government bodies will probably answer all inquiries.

Mr. B. was entitled to more consideration than he received. He should state his grievance to Mr. T. If possible he should see him and talk the subject over. Professional relations with a brother in a neighbouring village should not be broken off without first giving him an opportunity of answering any complaint.

Dartos.—If our correspondent will ask us particular questions we may be able to furnish him with the help he requires. We are not aware of any book containing the information.

Mrs. R. (Dulwich) is informed that we do not recommend individual practitioners or any general use of the practice to which she refers.

A QUERY.

To the Editors of THE LANCET.

SIRS,—A lady aged forty-six has consulted me for an alleged fibroid in the posterior wall of the uterus. She was seen ten months ago by two medical practitioners (one of whom is an M.D. and M.R.C.P. of London and the other a F.R.C.S. of London), who examined her per rectum and pronounced that she had a fibroid tumour of the size of a chestnut. I have made a careful vaginal examination and can find no such growth. She has had irregular hæmorrhages since she was forty, which have been absent during the last eight months. She has pressed me for my opinion of the case, and I have reluctantly had to tell her that her two medical attendants were mistaken in their diagnosis. I based my decision on the fact that the hæmorrhages came on irrespectively of menstruation and on the impossibility of a fibroid completely disappearing in so short a time. Is this decision correct?

Is it not more probable that the hæmorrhages were due to the onset of the climacteric? An expression of opinion on this case will greatly oblige.

I am, Sirs, yours truly,

Jan. 12th, 1895. CONSULTANT.

*** As regards the hæmorrhage, it seems most probable that it was due, as our correspondent suggests, to the approach of the menopause. As to the question whether the two gentlemen who examined and found a fibroid the size of a chestnut were mistaken, or whether, on the other hand, our correspondent, who failed to find it ten months later, was mistaken, it is impossible for us to decide. Many good men not in special practice frequently make mistakes about physical signs concerning the uterus where there is something much more definite than a growth the size of a chestnut. We would remind our correspondent that it not rarely happens, even when the uterus is sufficiently enlarged by fibroids to form a tumour in the hypogastric region, that there is no unusual hæmorrhage.—ED. L.

AN INQUIRY.

To the Editors of THE LANCET.

SIRS,—On the night of the 7th inst. I was called to see a child which had a sore throat and a slight rash, but presented no symptoms of malignant scarlet fever. It suffered from incessant vomiting and purging all night, and died suddenly next morning, after an illness lasting only twenty-four hours. A post-mortem examination revealed only gastro-enteritis. It was later found that sewer air could make its way through a hole in one corner of the room where the child lay. Was the death due to scarlet fever or to poisoning by sewer air? In death caused by sewer air are there any pathognomonic post-mortem signs? and, if so, where are they described? Would bacteriological examination be decisive?

I am, Sirs, yours truly,

Jan. 17th, 1895. REGULAR SUBSCRIBER.

Enquirer.—It is courteous and proper, when a patient changes his medical man, to intimate the same to his previous adviser. If he fails to do so, or refuses, the practitioner called in is not under obligation to communicate the fact, but it might easily be a friendly and neighbourly thing to do so. A patient changing his adviser, and known to be doing so, should be informed by the new adviser of his duty.

C. W. L. is informed that his letter is receiving every attention. When we decide whether we can do anything practical and what we shall do we will communicate with our correspondent. In the meantime nothing would be gained by printing our correspondent's letter.

H. E. B. (Cricklewood).—We never recommend individual practitioners; but our correspondent's medical man would be able to inform him where he can obtain the best practical advice.

A QUESTION OF ETIQUETTE.

To the Editors of THE LANCET.

SIRS,—D. was out shooting with B., when he was accidentally shot in the foot. C. (the nearest surgeon) was sent for; also M. (B.'s medical attendant); also X. (D.'s medical attendant), the latter fifteen miles off. C. waited, and after consultation M. left, having an appointment. C. remained, and assisted at a Symes's amputation. X. carried on the case, but accepted C.'s offer to act in emergency. C. heard nothing more of the case for seven days, when B. wrote and asked him to sit up all night, as D. was very ill, and X. had left for home, and M. was not able to come. C. then found that reamputation had been carried out; so at first refused, but at B.'s request stayed in the house all night, but did not see D. 1. Was C. correct in refusing to see D. under the circumstances? 2. Was X. correct in reamputating without asking C. to be present?

I am, Sirs, yours faithfully,

Jan. 14th, 1895. DOUBTFUL.

*** The facts are too imperfectly stated to enable us to express a very confident judgment. It would have been courteous for X. to have consulted C. before reamputating, seeing that C. had been associated with him in the treatment of the case. C. acted kindly in staying in the house of the patient in place of M., and doubtless would have risen to the magnanimity of seeing the patient had need arisen.—ED. L.

QUALIFICATIONS AND TITLES.

To the Editors of THE LANCET.

SIRS,—I should be much obliged if you would kindly inform me through the columns of THE LANCET if there is any advantage in an L.R.C.P.I. possessing the L.M. as well. The latter diploma states that the candidate is "fully qualified" to practise therein. He is examined in midwifery for the L.R.C.P.; and does not this examination "fully" qualify him for the practice of midwifery? Would you also kindly suggest a suitable inscription for the doorplate of a practitioner who is L.R.C.P., L.M.(Irel.)?

I am, Sirs, yours faithfully,

Jan. 7th, 1896. OBSTETRICS.

*** A practitioner already registered would not derive any advantage from the additional degree. The proper style for our correspondent's doorplate is "Mr."—ED. L.

THE HYDERABAD METHOD OF ADMINISTERING CHLOROFORM.

To the Editors of THE LANCET.

SIRS,—During a recent visit to Hyderabad, Deccan, I had the pleasure of seeing chloroform administered on several occasions according to the method adopted by Surgeon-Lieutenant-Colonel Lawrie, the inhalations being conducted under his personal supervision. The routine of administration is briefly as follows:—The patient walks, if possible, or is carried into the operating theatre and lies down on the table with the chest uncovered. Four students then undertake the management of the patient. The first student announces so that every one present may hear all the phenomena and the exact time of occurrence from the beginning of the administration until the patient recovers consciousness, the amount of chloroform given, the variations of pulse respiration, &c., all being noted. The second student writes down the same on specially arranged forms. The third student stands on the administrator's right with a drachm measure-glass and a bottle of chloroform, and measures it out as required. The fourth student is the administrator. He takes a cone made of canvas, stiffened on either side with a thin piece of cane. In the apex of the cone is placed a piece of clean cotton-wool, on which is poured one drachm of chloroform. The cone is then held over the nose and mouth, but not in close apposition. Drachm doses are poured on the wool every minute until struggling commences, the dose is then reduced to half a drachm every forty-five seconds. Anæsthesia being complete, the smallest amount possible to keep the patient under is administered. If signs of irregular breathing appear after the patient has become unconscious the inhalation of chloroform is withheld until it becomes regular, artificial respiration being performed if necessary. Respiration is what they look to for a warning of approaching danger, and not the pulse. Dr. Lawrie is present during the whole time, correcting any inaccuracies in recording phenomena. The patient is not removed from the operating table until he shows signs of return to consciousness.

As a large number of your readers had not an opportunity of seeing chloroform administered by some of Dr. Lawrie's pupils in London last summer, I thought this brief account might be interesting to them.

I am, Sirs, yours truly,

Jan. 4th, 1895. CLARENCE READ.

"ON THE TREATMENT OF GLEET BY THE URETHROSCOPE."

To the Editors of THE LANCET.

SIRS,—In reference to the distribution of marked copies of the *Medical Week* to various clubs, to which your correspondent of last week calls attention, I am requested by Dr. de Maurans, the editor-in-chief, to state that no copies were sent from the office to other than subscribers, the Isthmian Club not being among the number.

I am, Sirs, yours faithfully,

ALFRED S. GUBB, M.D. Paris.

Rue de l'Abbé-de-l'Épée, Paris, Jan. 15th, 1895.

E. T. J.—The only institutions which receive male epileptics are the Home for Epileptics, Maghull, Lancashire, and the Colony at Chalfont founded by the National Society for the Employment of Epileptics, whose offices are at 12, Buckingham-street, Strand. Our correspondent should address the secretaries of those institutions; but neither receives patients if there is any marked mental defect.

A Correspondent writing from Tremont-terrace, Leeds, is informed that we never give medical advice. His annoying ailment is generally susceptible of relief or cure, and we advise him to consult his regular medical practitioner, who will, if the condition remains obstinate, recommend him how to obtain further advice.

Mr. W. Ll. Jones.—The physical examination for the different medical services is much the same. It will greatly depend upon the number of teeth lost or decayed, the age of the individual, his present state of nutrition, and the estimated effect which this defect would probably have upon mastication and digestion.

Nursing Sister.—The India Office.

During the week marked copies of the following newspapers have been received:—*Derbyshire Times, Leicester Post, United Service Gazette, Whitehall Review, La Presse (Paris), Sussex Daily News, Bristol Times, Manchester Guardian, Windsor Gazette, Newcastle Chronicle, St. Austel Star, Swansea Journal, Glasgow Evening News, Birmingham Post, Huddersfield Daily Chronicle, Scarborough Post, Cape Times, Liverpool Mercury, Dunstable Borough Gazette, Somerset County Mail, Pullman's Weekly News, Witney Gazette, Local Government Chronicle, Sanitary Record, West Middlesex Standard, Brixton Free Press, Hertfordshire Mercury, Grimsby News, Weekly Free Press and Aberdeen Herald, City Press, Reading Mercury, Midland Weekly Herald, Builder, Pioneer Mail, Scotsman, Architect, Swindon Advertiser, Leeds Mercury, Times of India, Barnsley Independent, Grays Standard, Surrey Advertiser, West Middlesex Advertiser, Local Government Journal, Hawick Express, Alloa Advertiser, Guy's Hospital Gazette, Burton Chronicle, Hertford Times, Loughborough Examiner, Bristol Mercury, Building News, Yorkshire Post, Kent and Sussex Courier, Tunbridge Wells Gazette, Runcorn Guardian, Brecon and Radnor Express, Beverley Recorder, Grantham Journal, Heckmondwyke Reporter, St. Bartholomew's Journal, The Porcupine, Preston Herald, &c., &c.*

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